NEW EQUIPMENT DIGEST

TECHNOLOGY DEPARTMENT

A PENTON PUBLICATION

EQUIPMENT • IMPROVEMENTS • PROCESSES • MATERIALS • METHODS • APPLICATIONS • LITERATURE

Vol. 14, No. 9

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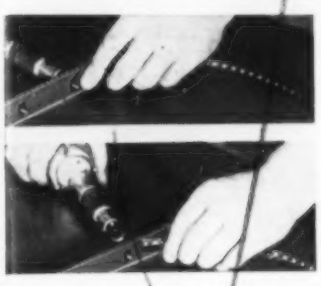
September, 1949

METAL FASTENERS
continuous strips speed assembly



Permitting operator to break strip from leading fastener with clean separation as it is tightened, Tandem-type flat Speed Nut consists of strip of pretempered steel into which fasteners are stamped with partial shear separating each unit. Produced in either strips or coils, they are available at present for size 10-24 screws only. Made by **Tinnerman Products, Inc.**, 2044 Fulton Rd., Cleveland 13, O.

▲ Mention Item **NED-6000** when writing ▲

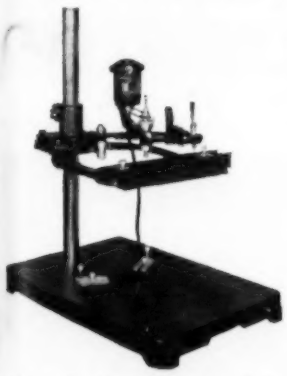
ELECTRONIC AREA CALCULATOR
measures surfaces of 1 to 75 sq in.

Accurate to within 1 per cent, this calculator instantaneously records area in square inches on a scale. It eliminates measuring irregular areas geometrically and is applicable wherever flat surfaces are encountered. Principle of operation is electronic comparison of light values which is relatively simple and easy to maintain. Same machine with variations can be used for measurement of density. Instruments can be made also to measure areas many times size noted here with same accuracy. Made by **Z & W Machine Products, Inc.**, 5151 St. Clair Ave., Cleveland 14, O.

▲ Mention Item **NED-6001** when writing ▲

ENGRAVING MACHINE
accommodates work up to 19 in. high

Work areas covered by cutter of this model 253 engraver range from 7½ x 2¼ in. with pantograph ratio of 1.5:1 to 2¾ x 1⅛ in. with 4:1 setting of arms. Adjustment for height of work is accomplished by raising or lowering engraving mechanism on support column. If desired, pantograph unit and sub-base can be removed and used as portable engraver on pieces too large for mounting on standard base.



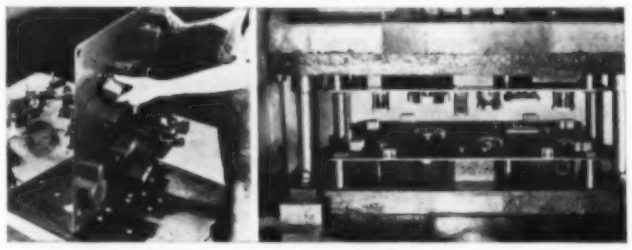
Precision machined pantograph arms with minimum number of bearing points have quick-change stud which permits quick, accurate selection of any of four reduction ratios. Spindle is mounted on preloaded ball bearings and equipped with chuck which accommodates midget cutters, burrs or mounted points having ⅛-in. diameter shanks.

Copy carrier can hold ¾-in. and 1½-in. master copy blanks up to 10½ in. long. Machine is driven by 115-v universal motor. Made by **Mico Instrument Co.**, 80D Trowbridge St., Cambridge 38, Mass.

▲ Mention Item **NED-6002** when writing ▲

MAGNETIC DIES
for perforating materials up to ⅛-in. mild sheet steel

Fast economical method of assembling die sets in any size and for any number of holes is afforded by reusable magnetic perforating punches and dies. They are assembled in templet mounting plate, and on completion of any job, punches and dies with their retainers are removed quickly and are ready for use in new arrangement. Only two templets are then stored, and they make possible duplication of original job at any time.



All standard sizes of punches, dies, bushings, retainers and other equipment for perforating round, oval, square or rectangular holes from 1/32 to 3-in. diameter are stocked. Special shapes or sizes can be furnished to order. In perforating, tolerances can be held to 0.0005-in. or as close as can be jig bored. Made by **S. B. Whistler & Sons, Inc.**, 746 Military Rd., Buffalo, N. Y.

▲ Mention Item **NED-6003** when writing ▲

SOLDERING GUN
250-w model for heavy-duty service

Suitable for electrical, telephone, commercial and industrial soldering, model WD-250 soldering gun has fast 5-second dual heat and prefocused spotlight. Improved Rigid-Tip design provides more copper in chisel-shaped head than in previous models, with basic structure giving bracing action. Terminals are in over-and-under position to give accessibility to tight spots and increased visibility with built-in light. Made by **Weller Mfg. Co.**, 808 Packer St., Easton, Pa.

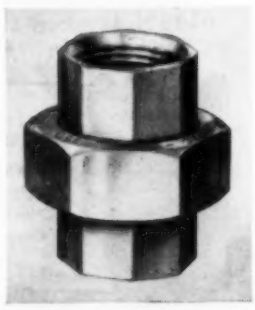
▲ Mention Item **NED-6004** when writing ▲

STEAM CLEANER
vaporizes solution at 110-gph rate

Measuring only 44 x 24 x 45 in., model Q completely enclosed cabinet type steam cleaner has been improved by simplification and rearrangement of all elements. Basic features including automatic type pump, welded construction, automatic fuel regulator, automatic safety shutoff, high velocity nozzle and aerated gun grips have been retained. Made by **Kelite Products, Inc.**, 130 Elmyra St., Los Angeles 54, Calif.

▲ Mention Item **NED-6005** when writing ▲

STEEL UNION
for service at pressures to 150 psi



All steel surfaces of this PICR steel union are zinc plated including special wedge-type bronze seat and threads to render it corrosionproof. It has ends made from steel pipe coupling stock and polygonal shaped to permit use of open-end wrenches in close-quarter installations. Made by **E. M. Dart Mfg. Co.**, Providence, R. I.

▲ Mention Item **NED-6006** when writing ▲

Read Carefully
CHECK AND PASS ON

✓	NAME AND TITLE	SEE ITEM NO.

SPEED LIMITING DEVICE
for motors and motor-generator sets

Suitable for horizontal and vertical operation, this speed limiting device can be adapted to speed range of from 100 to 2000 rpm. It is built with weight and tension spring combinations to suit particular speeds within overall range. Rotating element is balanced about axis of rotation to assure freedom from vibration, and trip arm guard prevents accidental actuation of tripping mechanism. While each device is normally set at factory for operation at about 15 per cent overspeed for rated speeds up to 500 rpm and 10 per cent overspeed for higher rated speeds, adjustments can be made in field if necessary. Made by **Allis-Chalmers Mfg. Co.**, Dept. 1132, 6900 Norman St., Milwaukee 1, Wis.

▲ Mention Item **NED-6007** when writing ▲

Do YOU know?

■ INFORMATION which is useful for those connected with merchandising of plastics products is presented in revised 36-page illustrated booklet "How to Buy and Sell Plastics." How to merchandise plastics profitably, steps to follow in buying them, labeling, retail advertising and characteristics of eleven groups of plastics are discussed. Issued by Plastic Materials Manufacturers Association, Inc., Tower Bldg., Fourteenth & K Sts., N.W., Washington 5, D. C.

▲ Mention Item **NED-6008** when writing ▲

■ BIMETALLIC inductor washer disk of solidly bonded copper and steel is being made for use in automatic magnetic brake of two new fishing reels which eliminate back lash in casting. Sheets of 0.20-inch copper and 0.004-inch steel are bonded metallically by same process as used in manufacture of Laminum shim material. Washers are then stamped out to tolerance of plus or minus 0.001-inch on diameters. Made by Laminated Shim Co., 69 Union St., Glenbrook, Conn.

▲ Mention Item **NED-6009** when writing ▲

■ "EMULSION Extinguishment of Oil Fires with Water Sprays" is title of 16-millimeter sound Kodachrome film which is available for free showing before interested groups. Spectacular fires in full color and running commentary explaining how method works highlight film. Showings may be scheduled through General Sales Manager's Office, Grinnell Co., 251 Exchange St., Providence 1, R. I.

▲ Mention Item **NED-6010** when writing ▲

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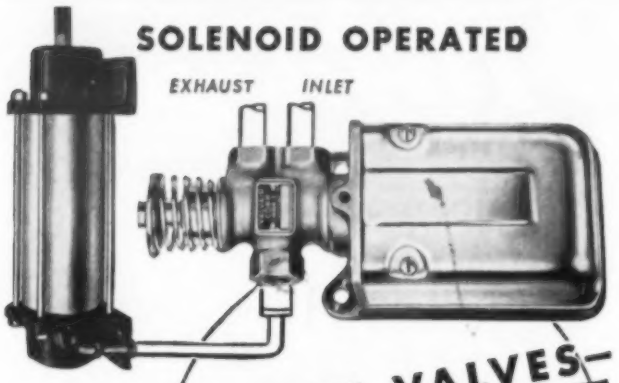
SOLENOID OPERATED



AIR CONTROL VALVES—
"VALVAIRS"

- NON-CORROSIVE
- NO METAL SEATS
- FULL PIPE AREA USED

2-WAY
3-WAY
4-WAY
60 numbers to choose from

Ask for Bulletin S-N
VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair 2-WAY 3-WAY 4-WAY

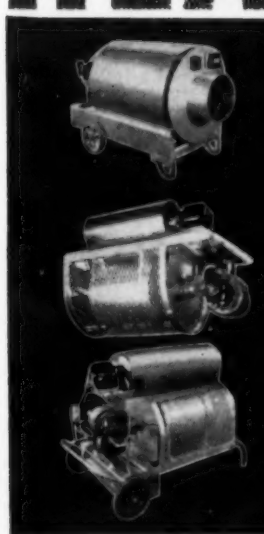
▲ Mention Item NED-6011 when writing ▲

QUICK HEAT
WHERE YOU WANT IT . . .
. . . WHEN YOU WANT IT

..at the flick of a switch!

Just flick the switch for efficient space or spot heating available (with either of the portable units) 5 minutes after the unit is delivered. No flue needed—completely SAFE—no carbon monoxide or unburned hydrocarbons.

new SILENT GLOW HEATERS
PORTABLE



A complete line of 8 Industrial Heaters, delivery from 170,000 to 800,000 B.T.U. per hr.—low original cost—low operation cost—using No. 3 oil—manual or fully automatic operation—rigid, light weight construction—portable—ignite electrically at the flick of a switch—no matches or open torch.

Typical Uses
FOR HEATING IN WAREHOUSES • GARAGES • FOUNDRIES • HANGARS
NEW CONSTRUCTION • PLASTER • CONCRETE • MACHINERY
FROZEN PIPES OR GROUND • PRE-HEATING FREIGHT CARS
EMERGENCY HEATING, ETC.

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THE SILENT GLOW OIL BURNER CORP.
865 Windsor Street
HARTFORD 5, CONNECTICUT

Name _____
_____
_____
State _____

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▲ Mention Item NED-6012 when writing ▲

MIDGET THERMOSTAT
employs bimetal thermal element

This compact, quick make and break type M thermostat is usable for close temperature control of electronic devices, appliances and industrial apparatus. Control results from electrical independence of disk type bimetal thermal element. Built with variety of terminal arrangements, unit operates on small differentials in range of from −60 to 600° F. Standard closure type for normal operation and hermetically sealed type for special applications are available. Made by **Stevens Mfg. Co.**, Dept. B, Mansfield, O.

▲ Mention Item NED-6013 when writing ▲

STACKING BOX
for handling medium loads

Supplied in 16 and 18-gage steel, this stacking box can be obtained in 10 x 16 x 6-in. to 10 x 20 x 8-in. sizes. Design features include continuous stacking rim on all four sides to assure maximum rigidity, reinforced corners, spot welded construction, four rivets for extra strength and drop handle on each end. Made by **Bay, Inc.**, 3009 N. Sixteenth St., Philadelphia 32, Pa.

▲ Mention Item NED-6014 when writing ▲

GRINDING WHEELS
cut most metals and nonmetals including plastics, asbestos and BX

Made from laminated sheets of cotton fiber filled with abrasive grain, Fibrex Red synthetic resin bonded grinding wheels are suitable for applications between heavy grinding and light sanding. They can be used also for certain types of abrasive cutting-off, deburring and finishing operations. They are obtainable in 7 and 9-in. depressed center type for use on portable disk sanders and right angle type portable grinders and in straight wheels 6, 8, 10 and 12 in. by ⅛-in. thickness for cutting-off and general purpose use. Slightly flexible, wheels permit certain amount of side pressure without risk of wheel breakage and cut fast and clean without fraying or tearing out at edge. They are particularly useful for weld grinding, especially on stainless steel, and for cleaning up rough ragged surfaces on structural steel work, fabricated metal parts, etc. Made by **Simonds Abrasive Co.**, Tacony & Fraley Sts., Philadelphia 37, Pa.

▲ Mention Item NED-6015 when writing ▲

cut glove costs

JOMAC Gives Better Hand Protection 5 Ways!

- Double life . . . Interchangeable . . . Fits either hand
- Washable . . . Gives extended wear
- Protects against sharp metal edges . . . Improves grip
- Completely flexible . . . Permits full hand freedom
- Heat- and Flame-Resistant . . . Will not retain heat

JOMAC Heat- and Flame-Resistant Work Gloves are made to meet specific requirements for better hand protection—to give longer, more economical wear under the most exacting conditions. Write us today about your hand-protection problem. We will be glad to recommend the proper JOMAC glove for the job.

C. WALKER JONES CO.
All Ways a JOMAC Glove to Fit the Job
6148 N. Lambert Street Philadelphia 38, Pa.

JOMAC gloves are being used in
Buffing Operations
Rubber Industry
Plastics Industry
Ceramics Industry
Foundries
Glass Plants
Metal Handling
Heat Treating
Will outwear mineral fiber gloves!

▲ Mention Item NED-6016 when writing ▲

WIDE CHOICE HORIZONTAL (Verticals Not Shown) EXTRUDERS TO FIT YOUR NEEDS

What problems of extrusion have you—from pounds to high tonnage per hour? Bonnot equipment and know how may solve your problem—and promptly!
WRITE TODAY!

THE BONNOT COMPANY
Mulberry Road S.E. Canton, Ohio

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BEST BUY BROWNING

BETTER SHEAVES FOR BETTER DRIVES

BROWNING
Gripbelt Sheaves With Split Taper Bushings

Be sure to check Browning's new low prices before you buy.
Write for the name of the BROWNING distributor near you.
BROWNING MANUFACTURING COMPANY
INCORPORATED
MAYSVILLE, KENTUCKY

BEST BUY BROWNING

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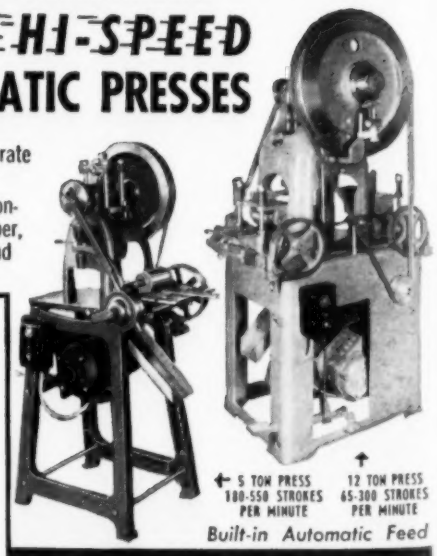
Speed and Efficiency Equal - MORE PRODUCTION!
- MORE PROFIT!!
- LOW COST!!!

WITH PRECISION BUILT
DIEBEL HI-SPEED AUTOMATIC PRESSES

- Economical to Operate
- Low Initial Cost
- For Ferrous and Non-Ferrous Metals, Fiber, Plastics, Rubber and Paper.



Built-in Automatic Feed

COMPLETE INFORMATION
Mailed on Request
Production Facts, Photographs of Compound and Progressive Dies, Capacities, Ranges, Sizes, Dimensions, Full Specifications.

DI MACHINE, CORP.
2701 IRVING PARK ROAD, CHICAGO 18, ILL.

▲ Mention Item NED-6019 when writing ▲

1200 HOLES DRILLED PER HOUR --WITH A SINGLE SPINDLE

The New Model "K" Automatic Drilling Unit, installed on a hand-indexing fixture at McLaren Screw Products, Detroit, is achieving the phenomenal production rate of 1200 holes per hour, using a 13/64" diameter drill with a 30° included angle on point.

If you would like to step up your own production rate in drilling holes up to ⅜" diameter, send blueprint or part for our recommendation. No obligation.

WRITE FOR Literature

GOVRO-NELSON CO.
1933 Antoinette
DETROIT 8, MICH.

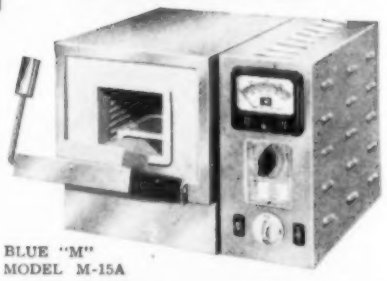
Automatic DRILLING UNIT

▲ Mention Item NED-6020 when writing ▲

ALL POLISHED STAINLESS STEEL

BLUE ELECTRIC **FURNACE**

IT'S A BEAUTY • RUGGEDLY BUILT • SCIENTIFICALLY DESIGNED •



BLUE "M"
MODEL M-15A

LABORATORY AND GENERAL FACTORY

SUPER-VALUE

MADE ENTIRELY of highly polished STAINLESS STEEL. *"Magic Trigger"* Control saves money. No rheostat power waste. Automatically maintains all temperatures. *Set It! Forget It!* Finest Non-Flaking, long-life Modella heating elements. (Replaceable.)

$107.50 F.O.B. CHICAGO

FULLY INSTRUMENTED TEMPERATURE CONTROL

Separate Temperature Control Box. All Controls protected and kept at approx. room temperature. Large Pyrometer—Graduated °F and °C, Millivoltmeter. Alnico magnet type. 2 NEON PILOTS. *I.D.*—4¾" w. x 4" h. x 9½" d. *O.D.*—17" w. x 12½" h. x 16" d. Heavily insulated, all sides. *FAST HEATING!* Double-Seal, precision hinged door. 115 V. A.C.—1500 W. Other sizes and voltages available. Bulletin on request.

HEAT RANGE
UP TO 2000° F ON AND OFF
150 TO 1850 F CONTINUOUS

ORDER DIRECT AND SAVE!

Used by leading LAB Men and Industries. Shipped guaranteed to satisfy. For other ovens and furnaces—

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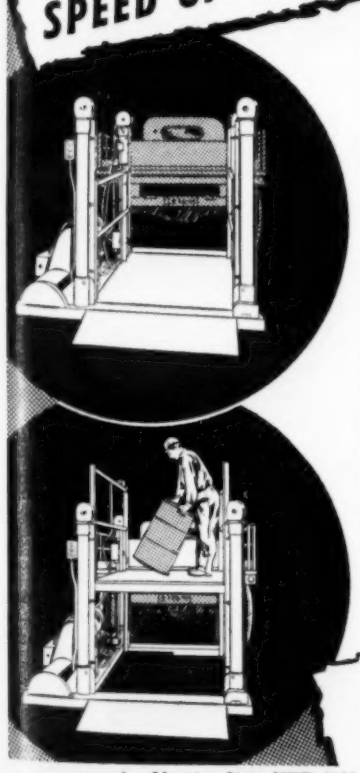
MODERN ELECTRIC LABORATORY
ELECTRIC FURNACE AND OVEN SPECIALISTS
6131-6133 S. Wentworth, Chicago 21A, Ill.

▲ Mention Item NED-6021 when writing ▲

Easy Way to . . . SPEED UP YOUR SHIPPING!



ATLAS ONE-MAN TRUCK LOADER

"The Portable Loading Platform"

- 1 to 3 ton capacity
- Up to 20 ft. range
- Easily moved on retractable casters

Standard platform 4 ft. x 4 ft.—other sizes to meet your requirements. Electrically operated with either floor or platform control or both. Rugged, all welded steel construction. No strain . . . no exertion with Atlas One-Man Truck Loader.

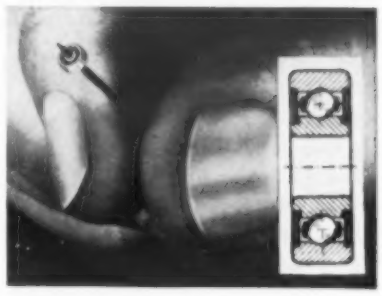
Also Makers of HI-LIFT Extension Scaffold and HI-LIFT Marquee Servicer

Write for Complete Information

ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

▲ Mention Item NED-6022 when writing ▲

ANNULAR BALL BEARING
has outside diameter of only 3 mm



Made in precision grade of chrome steel and ground on all functional surfaces, type R-073 miniature annular ball bearing is applicable to use in instruments, subminiature motors, laboratory apparatus, testing devices, aircraft instruments and other products having small moving parts. It has uninterrupted raceways, has no filling notch, and is equipped with double shield and separator. Shields are designed for dust protection, and separators assure uniform load distribution while at same time reducing internal friction. Bearing has 0.75-mm bore and seven evenly spaced 0.5-mm balls. It takes radial and thrust loads. Made by **Landis & Gyr, Inc.**, 102 Fifth Ave., New York 11, N. Y.

▲ Mention Item NED-6023 when writing ▲

POCKET MICROSCOPE
fixed focus assures ease of use

Available in either 20 or 40-power model and 4 or 4½ in. long, respectively, this pocket microscope is slightly larger in diameter than pencil. It is equipped with four lenses mounted in satin finish aluminum tube and brings out minute details clearly and sharply. No adjustments are necessary since instrument has fixed focus. In use it is held vertically with opening toward light and end of tube touching object. Price of 20-power model is $2.98 and 40-power model $3.95. Made by **DuMaurier Co.**, Elmira 5, N. Y.

▲ Mention Item NED-6024 when writing ▲

GRAVITY ROLLER CONVEYOR
designed for handling small parts

Recommended for conveying such items as cans, bottles and pill boxes, this gravity roller conveyor is constructed with ¾-in. OD rollers mounted on ball bearings and set 14 rollers per foot. It is well adapted to handle tin cans, since chime of can rides rollers without catching. Unit can be used either as portable or permanent installation in food processing, drug and sundry manufacture and similar industries. Conveyor can be obtained in standard width of 4½ or 11½ in. overall, or can be built to specifications. Made by **Metzgar Co.**, 416 Douglas St., N.W., Grand Rapids 4, Mich.

▲ Mention Item NED-6025 when writing ▲

Cabinet Bench

Heavy steel top for small grinders and vises.
Twelve feet storage.
3 point locking device.
Adjustable shelf.
Flat key lock.
36" x 24" x 34".

Selling Price, $39.27—OUR PRICE: **$35.38**

Desk Cabinet Type

Top and drawer cabinet for records, tools, etc.
34" wide, 30" deep, 53" high.
Flat key lock.
3 point locking device.

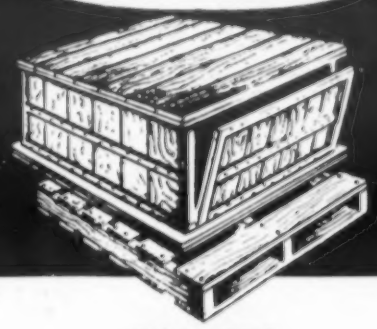
Selling Price, $55.94
OUR PRICE: **$47.55**

Mail Orders Promptly Filled

GLOBE TRADING COMPANY
1815 Franklin Street Detroit 7, Michigan

▲ Mention Item NED-6026 when writing ▲

a New Era IN LUMBER SERVICE



PALLETS

HEAVY CRATES — LARGE BOXES — WOOD PARTS
PACKAGED LUMBER — PALLET REPLACEMENT PARTS

STERLING INDUSTRIAL LUMBER FABRICATION

means the lumber products you buy are engineered and manufactured "ready-for-use", to do a particular job.

To meet the requirements of industrial lumber consumers, we have developed facilities in Chicago, Illinois and Goodwater, Alabama; staffed with lumber specialists and engineers capable of solving your lumber problems.

Carload shipments of industrial lumber, packaged or boxcar loaded and LCL pallets are other STERLING services to industry.

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PUllman 5-0220

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Equipment for Research, Development, Maintenance and Production

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Lift Loads SAFELY with DROP FORGED BTC SAFETY HOOKS

Here's the new, safer way to handle heavy loads — BTC Drop Forged Safety Hooks. These sturdy hooks feature automatic mousing and a safety-tie lip hook that affords extra strength . . . prevents slings from slipping and hooks from snagging or straightening. BTC's mousing automatically engages when loads are applied; disengages when loads are released. Special shoulder and lip lock construction maintains load carrying capacity even if pin is sheared. Drop forged steel construction gives BTC Hooks maximum strength. Available in 5-ton or 10-ton sizes in either Eye Bridge or Shank Bridge — both sizes replace eight standard open hook sizes. For safer load handling, order BTC Drop Forged Safety Hooks from your supplier today.

The Brewer-Titchener Corporation
Cortland, New York

Please send me bulletins describing the new BTC Drop Forged Safety Hooks.

Name .....

Company .....

Street ..... City .....

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Every Kind
Quick Delivery

NEARBY STOCKS INCLUDE:

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—U, M. & sheared, Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types & coatings
TUBING—seamless & welded, mechanical & boiler tubes
STAINLESS—Allegheny sheets, plates, bars, tubing, etc.
REINFORCING bars & access.
BABBITT bearing metal
MACHINERY & TOOLS for metal fabrication

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Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco

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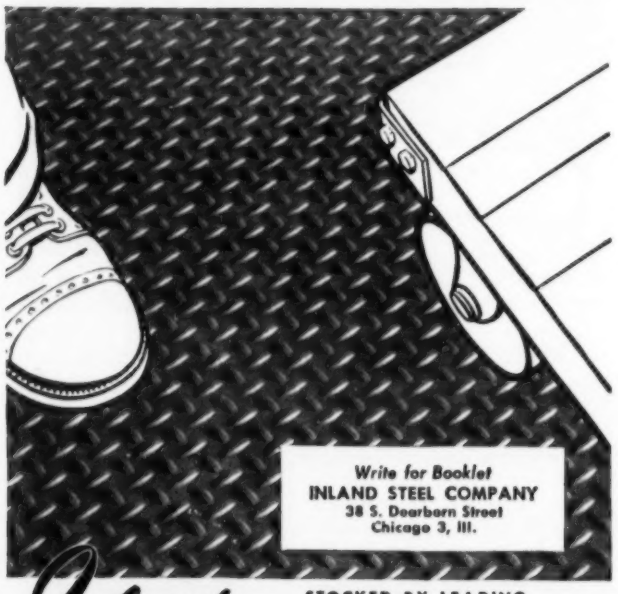
Safe Movement
OF MEN AND MATERIALS



STOCKED BY LEADING STEEL WAREHOUSES

Inland 4-WAY* SAFETY PLATE

* Reg. U. S. Pat. Off.

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put
CHROMALOX
Electric
TUBULAR HEATERS
to work in your plant!

Bent and Formed to Exactly Fit Your Needs!

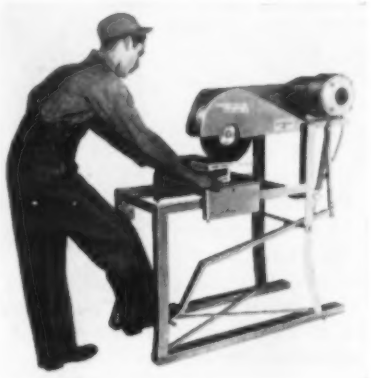
CHROMALOX Tubular Heaters operate immersed in liquids, soft metals and molten salts. Exclusive triangular shape can be clamped to metal surfaces and installed in machined grooves to heat platens and dies. Tubular Units are used for radiant and convection heat in ovens and other high temperature equipment. Or, for applications such as plastics molds, cylinders, nozzles, etc., they can be cast into aluminum and iron to your specifications. Sheathed in steel, alloy or copper. Straight lengths or curved to fit your requirements.

WRITE TODAY FOR CATALOG 42
which shows Chromalox Tubular Heaters and the complete line of other industrial heaters for every use.

EDWIN L. WIEGAND CO., 7509 THOMAS BOULEVARD, PITTSBURGH 8, PA.
See other advertisement on page 49
CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

Mention Item NED-6032 when writing

MASONRY SAWS
wet or dry-cutting models feature automatic positioning of table

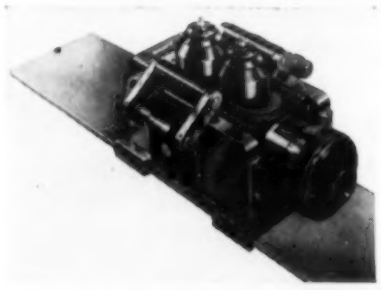


Masonry materials of varying thickness are cut easily by Fireproofer saws. Cutting table can be raised to desired height and automatically locks in place. Model WF performs wet or dry cutting, with changeover quickly accomplished. It incorporates self-priming pump and four water jets spraying against blade, and is powered by totally-enclosed dustproof 1½-hp motor. Model F-14 is standard type of dry-cutting saw without dust suppression feature. It has 14-in. blade capacity and totally-enclosed, dustproof 1½-hp motor. Illustrated model F-12 is similar to F-14, but has 12-in. blade capacity and 1-hp motor.

All models have angle iron frame and sheet steel protective shield, and are unit welded. Working parts of blade assembly function as single unit, mounted on pivoted arm. Diamond and abrasive blades are available for cutting all types of masonry, steel wire mesh and rod reinforcement. Made by **Martin Fireproofing Corp.**, Saw Div., Dept. 10, 2200 Military Rd., Buffalo 17, N. Y.

Mention Item NED-6033 when writing

CONTINUOUS WIDTH GAGE
is set directly by micrometer dial and does not require master gage



Recommended to assure uniform diameter in production of round or flat wire, either bare or insulated, model B magnetic continuous width gage indicates size of continuous roll of wire or thin strip material as it is being processed. Device consists of gage head, slide base, meter and power unit.

Gage has two gaging rolls which are in contact with wire or material as it passes through gage. Wire is guided through gaging rolls by two leveling rolls under tension which flatten out material and control passline so that true measurement is indicated. Any variation in diameter or width from predetermined setting is magnified electrically and shown on indicating meter.

Gage is set directly to required measurement by micrometer dial and does not require master. Instrument can be used with control meter to signal operator or to make adjustments automatically to maintain correct measurement. Made by Pratt & Whitney Div., **Niles-Bement-Pond Co.**, 20 Charter Oak Blvd., West Hartford 1, Conn.

Mention Item NED-6034 when writing

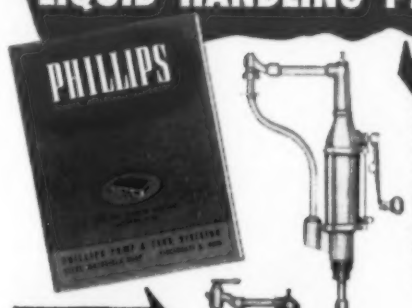
Tasks requiring lifting, stooping, straining, are unpopular with workers . . . unprofitable to management. Logan Conveyors are engineered to do the tedious and tiring tasks, releasing skilled hands for productive operations and making jobs more attractive to millions of employees. The lower costs which conveyorizing promote are welcome (and necessary) today as we enter an era of keener competition. Send for literature.

Logan Conveyors

LOGAN CO., 215 CABEL ST. • LOUISVILLE 6, KY.

Mention Item NED-6035 when writing

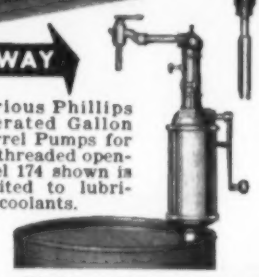
THIS BOOK SOLVES YOUR LIQUID HANDLING PROBLEMS



THIS WAY

Fully describes Phillips Hand Operated Quart Stroke Barrel Pumps. Attaches to any barrel with a 1½ or 2" threaded opening . . . for handling oil, alcohol, turpentine. Model 19 with swing return drain shown.

THIS WAY



Shows various Phillips Hand Operated Gallon Stroke Barrel Pumps for 1½ and 2" threaded openings. Model 174 shown is ideally suited to lubricants and coolants.

THIS WAY

Describes Phillips Tank Units with Hand Operated Gallon Stroke Pumps. Tank of Model 81 shown is 20 x 27 x 30" high. Ideal for battery installation. Can be supplied with casters or dolly for movement to any location. Other sizes available. **Write for prices and FREE Catalog—today!**

PHILLIPS PUMP & TANK CO.
5020 Brotherton Rd. Cincinnati 9, Ohio

Mention Item NED-6036 when writing

ONLY $215 FOR THE GREEN ENGRAVER
. . . yet it's fast, versatile and rugged enough for die steel

The Green Engraver offers great speed and convenience.

Quickly cuts up to four lines of letters from 3/64" to 1" on curved or flat surfaces whether made of metal, plastics or wood . . . operates by merely tracing master copy—*anyone* can do an expert job. Special attachments and engineering service available for production work. Just the thing for radio, electronic apparatus and instrument manufacturers. Write today for Bulletin NED 9.

For *quality* engraving on

- Panels
- Lenses
- Dials
- Scales
- Name Plates
- Instruments

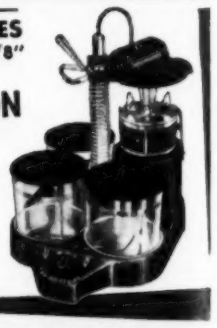
. . . also does routing, profiling and three dimensional modeling.

GREEN INSTRUMENT CO.
385 Putnam Ave.
Cambridge, Mass.

Mention Item NED-6037 when writing

CLEANS, RINSES, POLISHES, DRIES
smallest metal parts, in work basket, 3-3/8" deep by 5-1/2" I. D.

L&R INDUSTRIAL PRECISION CLEANING MACHINE



Features new ball bearing gear reduction motor, other refinements to make it the most efficient small parts cleaner. Triple nesting baskets fit larger basket to clean 3 sets of parts.

$262.50

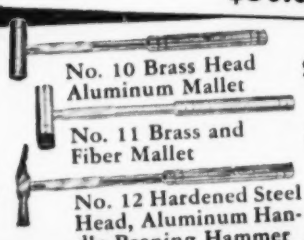
L&R FLEXIBLE SHAFT MACHINE

Foot rheostat controlled. Use with any flexible shaft tool attachment. 1/12 H.P., 115 volts, AC-DC. L&R Flexible Shaft Motor, cord set, rheostat and L&R No. 17 quick-detachable radial handpiece with No. 0 Jacobs Chuck.

$50.00

L&R MALLETS AND HAMMERS

Jewelers' type for fine precision work



No. 10 Brass Head Aluminum Mallet **$1.00**
No. 11 Brass and Fiber Mallet **$1.25**
No. 12 Hardened Steel Head, Aluminum Handle Peening Hammer **$1.50**

Place Your Order or Write for Catalog Material to

L&R MANUFACTURING COMPANY
577 Elm Street, Arlington, New Jersey
55 E. Washington St., Chicago 2, Illinois
355 S. Broadway, Los Angeles 13, California

Mention Item NED-6038 when writing

it takes just 2 seconds to reach- and talk to anyone in your business with

ELECTRONIC AMPLICALL INTERCOMMUNICATION

Speeds Work Cuts Costs

SEE YOUR CLASSIFIED PHONE BOOK under "Intercommunication" for your local AMPLICALL specialist, or write us direct

Just touch a button for instant speaking contact within and between all departments of your business. AMPLICALL takes the load off busy switchboards—puts an end to wasteful walking, waiting and slowdowns—speeds up and increases work output. Pays for itself quickly by converting costly wasted time into working time. Get the full details on AMPLICALL today!

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SOUND EQUIPMENT — Rauland — INTER-COMMUNICATION

RAULAND-BORG CORPORATION • 3523-D ADDISON ST., CHICAGO 18, ILL.

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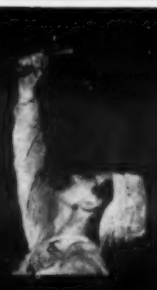
EASY TO APPLY —EVEN OVERHEAD



B-H POWERHOUSE CEMENT

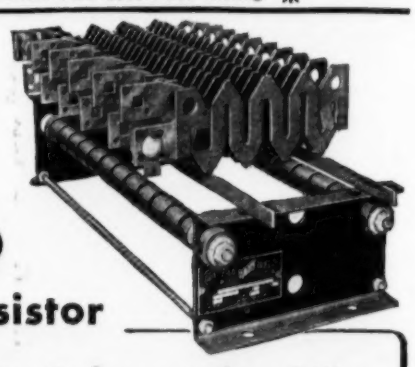
. . . the new finishing cement that insulates

- Only one coat needed!
- Extremely high adhesion!
- Adheres to blocks, blankets and cements!
- High insulating efficiency!
- Lineal shrinkage under 1%!
- Smooth, hard surface!
- Effective up to 1700°
- Easy workability reduces labor!

B-H POWERHOUSE CEMENT saves time, cuts costs—a one-coat application trowelled to required thickness in a single operation. Ask for complete information and free sample.

BALDWIN-HILL COMPANY
817 Brownig Avenue
Trenton, N. J.

Mention Item NED-6040 when writing



TAB WELD Plate Resistor

Steps up Resistor Performance these 3 Ways

Here's how the *welded* grid-assembly of the EC&M TAB-WELD Plate Resistor, shown above, reduces resistor maintenance costs and improves operation:

1. Stabilizes the Ohmic Value—A continuous path for current is maintained *independent* of the clamping-nuts.
2. Stops burning at grid eyes and at tap-plates. Trouble is eliminated in these concealed areas due to *intimate* contact maintained by welding.
3. Simplifies Tap-Shifting—(a) when adjusting resistance to improve motor operation on an existing installation; (b) when necessary to replace a section, a standard mill section can be taken from the storeroom and used *without change*.

Ask For Bulletin 942.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

Mention Item NED-6041 when writing

ILLUMINATED MAGNIFIER
adjustable to user's visual needs

Available with 20 or 40-power lens in either electric plug-in or battery model, Flash-O-Lens magnifier has knurled pinion for adjusting power tube to bring object into sharp focus. Instrument is recommended for examining chemicals, foods, dairy products, negatives, type, textiles, metals, finishes or any product which requires accurate inspection through illuminated magnification. Made by **E. W. Pike & Co.**, 492 North Ave., Elizabeth 3, N. J.

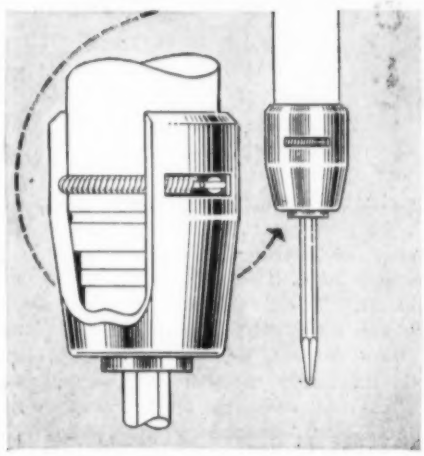
Mention Item NED-6042 when writing

PANEL METER
has clear shatterproof plastic case

Available in wide variety of ranges from 20 microamp to 50 amp and 5 mv to 500 v, this self-contained panel meter can be used also for higher ranges with external shunts and multipliers. It is interchangeable with present 2½-in. types and fits same mounting holes. Molded Koppers P-8 crystal polystyrene plastic case is heat resistant and casts no shadows on dial. Scale arc is 2½ in. long and movements are either Alnico V-magnets or chrome steel. Made by **Assembly Products, Inc.**, 1002 Bell St., Chagrin Falls, O.

Mention Item NED-6043 when writing

SAFETY TOOL RETAINER
adapts air hammers for multi-duty



With this retainer a riveting hammer can be converted to concrete breaker for light foundation work or wall demolition. Because of its light weight, it is ideal for overhead or platform work where heavier hammers could not be used. Retainer also converts hammer to rivet buster for steel work or for various other purposes where this type of air tool is used. Made by **Arrow Tools Inc.**, 1904 S. Kostner Ave., Chicago 23, Ill.

Mention Item NED-6044 when writing

FOR SAFE, LIFETIME HEAT-Choose Electromode

In factories, shops and offices from coast to coast, thousands of Electromode Industrial Heaters are supplying safe, efficient *lifetime* warmth. For only Electromode has the patented heating element that lasts a lifetime . . . and eliminates all danger of fire, shock or burn!

FREE CATALOG

ELECTROMODE CORPORATION Dept. NED
45 Crouch St., Rochester 3, N. Y.
Please send me the Electromode Industrial Heater Catalog.
NAME_____
FIRM_____
ADDRESS_____ CITY_____ STATE_____

Mention Item NED-6045 when writing

Shredded Paper IS THE IDEAL PACKING MATERIAL

produce it yourself for . . .

(1) Real dollar & cents savings
(2) Minimum inventories
(3) Substantial space savings
(4) Dependable supply

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

Mention Item NED-6046 when writing

Easier, More-Exact pH REGULATION

• For any process requiring close regulation of acidity or alkalinity, Foxboro pH Recorders offer exceptional ease and accuracy in finding and holding the correct pH point. A perfect combination of Standard Foxboro Dynalog* Electronic Recorders, electronic amplifiers, and glass electrodes furnishes continuous, exact records of pH. The glass-electrode method eliminates need for color-matching. Supplied with flow-type or immersion-type electrodes. Foxboro pH Recording Controllers also available for many uses.

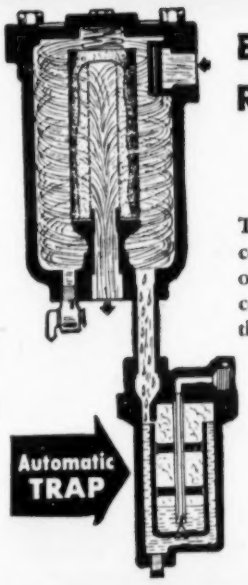
The Foxboro Company, 190 Neponset Ave., Foxboro, Mass., U. S. A. Branches in principal cities.

*Reg. U.S. Pat. Off.

FOXBORO Reg. U. S. Pat. Off. pH RECORDERS

Mention Item NED-6047 when writing

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES

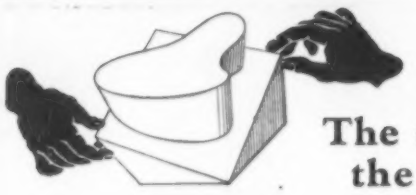
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 105.

R. P. ADAMS CO., INC.
227 E. Park Drive • Buffalo 17, N. Y.

ADAMS Poro-Stone AIR FILTER

Mention Item NED-6048 when writing



The shape's the thing...

The selection of a suitable steel and its subsequent satisfactory performance can be made easy by good design.

How and in what shape a part is made is, we hold, of fundamentally greater importance than of what it is made.

In designing a piece of machinery it is necessary to consider Design, the choice of steel, and its Heat Treatment. All three are highly significant factors, but of them we believe Design to be vital because even the best in steel and treatment will not save a poorly designed part.

To evaluate the importance of good design and its vital relationship to the selection of steel and its heat treatment, we have prepared a book—"Three Keys to Satisfaction". This starts by discussing mainly design factors involved in stress concentrations, and includes useful sketches comparing poor and good features of design from the aspect of subsequent metallurgy. It is available on request to all engineers and designers.

This booklet sent to you FREE

Climax Molybdenum Company
500 Fifth Avenue · New York City

F17

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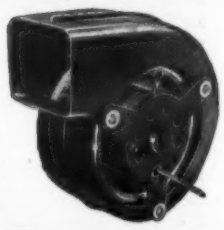
built-in DEPENDABILITY



Model 3802
Motor-in-wheel
A.C. blower, 100
C.F.M.

Redmond

MICROMOTOR BLOWER UNITS

Model 3744 A.C.
100 C.F.M.

Model 3901 A.C.
220 C.F.M.

Here's the solution to your small-blower problems . . . choose a Redmond Micromotor Blower Unit. Compact, sturdy, and thoroughly dependable, these units are built to give long-lasting satisfaction. Precision balancing of all moving parts minimizes vibration, assures quiet operation.

Each unit is powered with a Redmond Micromotor, famous for its ability to perform smoothly and quietly over thousands of hours of continuous duty.

A.C. blowers available in capacities from 50 C.F.M. to 220 C.F.M.; D.C. blowers up to 125 C.F.M. Single or double outlet. Outlet mounting flanges and inlet screens also available. Write for catalog.

Redmond COMPANY, INC.
OWOSSO, MICHIGAN
Offices in New York, Chicago, Los Angeles, Dallas
EXPANDED FACILITIES · PROMPT DELIVERIES · SERVICE BEFORE AND BEYOND THE SALE

Mention Item NED-6053 when writing

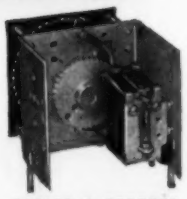
Tops IN ECONOMY ENGINEERING PRODUCTION
GUARDIAN
LEADING INDEPENDENT PRODUCER OF Relays

Your Opportunity to SAVE MONEY thru:

1. Uniformity of mass production backed by the finest of custom engineering.
2. Over ten thousand standard parts available to produce units built to your specifications.
3. Speedy deliveries to meet your schedules.

Without question—Guardian qualifies to design and furnish single units or complete assemblies, from simple start-stop controls to the complexities of time-delay, timing, counting, multiple credit, add and subtract or sequence operations.

Write—Submit your specifications for application data and cost-free recommendations.



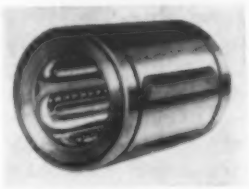
SERIES R STEPPER

SERIES 595 RELAY

GUARDIAN ELECTRIC
1626-K W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

Mention Item NED-6054 when writing

LINEAR BALL BEARING
for 1½-in. diameter guide rods



Having substantial load rating and suitable for use where shaft rigidity and capacity are important, this Ball Bushing is designed to give anti-friction support to linear motions along 1½-in. diameter guide rods or reciprocating shafts. Precision alignment is maintained over long periods since free-rolling ball bearing action reduces wear. Bearing has 2⅜ in. OD and 3-in. overall length. Made by **Thomson Industries, Inc.**, 1029 Plandome Rd., Manhasset, N. Y.

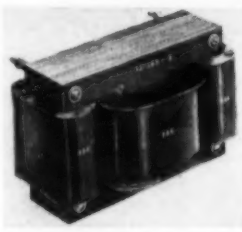
Mention Item NED-6055 when writing

BENCH-TYPE PRESS
cam actuated unit affords capacity of 1½ tons for light duty operations

Punching, riveting, forming, sizing, upsetting, bending, drawing, staking, nibbling, assembling and other precision operations are handled by this manually operated cam press. Roller is of hardened steel, and adjustable stops for lever accurately maintain length of stroke desired. Hardened steel cam is keyed to steel shaft. Total height of press less hand lever is 11¼ in. Bed is 3⅝ by 4 in. and die space stroke-up is 3⅝ in. Hole in slide for punch is ⅜-in. and stroke is ¾-in. Made by **Marshalltown Mfg. Co.**, 910 E. Nevada St., Marshalltown, Iowa.

Mention Item NED-6056 when writing

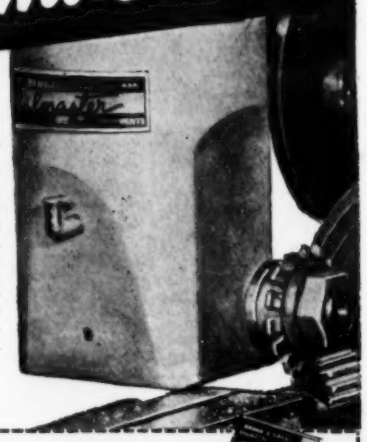
MAGNETIC REACTORS
give variable impedance for power control without moving parts



Large quantities of ac power can be controlled by small amounts of dc power with these saturable core reactors. They are recommended for all types of control circuits, automatic regulation of line voltage, dc power supplies and ac generators. Two types of reactors can be obtained, one with dc control circuit operating through dc coil and other with ac power circuit operating through ac coils. In first type, saturating effect depends on amount of dc power available. Standard reactors are designed for 50 to 150 ma and dc resistance of from 2000 to 4000 ohms. They are intended to operate from plate circuit of vacuum tube control. Second type unit consists of two ac coils internally connected in series and rated by maximum current carrying capacity of coils, maximum voltage and rated frequency applied across coils, minimum impedance with reactor saturated and maximum impedance available with reactor completely unsaturated. Made by **Sorenson & Co.**, 375 Fairfied Ave., Stamford, Conn.

Mention Item NED-6057 when writing

SEND NOW FOR FREE FOLDER ABOUT THE Milmaster



MILLING ATTACHMENT PAYS FOR ITSELF IN A FEW JOBS

WHEN YOU CUT COSTS today you're doing something! And you can certainly cut costs with the Milmaster. It reduces the number of set-ups...boosts machine output... does an efficient job in nearly any position. Milmaster is no gadget—it's a strong, accurate, precision-built piece of equipment for severest service conditions. Many attachments available. Send coupon today.

BEMIS & CALL CO.
Springfield, Mass.

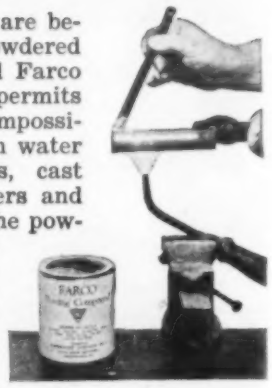
REDUCE COSTS · MAIL TODAY · BOOST PROFITS

Bemis & Call Company
340 Main St., Springfield, Mass.
Send me free folder describing the Milmaster "that converts one machine into a tool shop."

Company_____
Your Name_____
Address_____
City_____ State_____

Mention Item NED-6058 when writing

TINS ALL METALS



Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale dirt, and tin rusty surfaces thoroughly, it does not produce harmful fumes nor will it burn the skin. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packaged in 1½ lb. cans, price $3.00 f.o.b.

FARRELLOY CO.,

1246 North 26th St. Phila. 21, Pa.

Mention Item NED-6059 when writing

Mention Item NED-6060 when writing

MULTIPLE DRILLING with a MULTI-DRILL
INCREASES CAPACITY UP TO 800%

ADJUSTABLE TO ANY HOLE PATTERN FITS ANY DRILL PRESS

If your production requires drilling from 2 to 8 holes in a work piece, a MULTI-DRILL will cut costs and speed output up to 800%. The MULTI-DRILL is universally adjustable to any hole pattern—is compactly built to permit easy, unhampered operation with drill jigs or other special fixtures. Ruggedly built to take the wear and tear of high production work, the MULTI-DRILL will handle your long and short run multiple drilling jobs with ease and economy. The MULTI-DRILL will drill on hole centers as close as 3/32"—handle drill sizes up to 3/8" in steel. Special adaptations available.

There is a Commander MULTI-DRILL Distributor in your area. Write for his name, literature and complete details.

COMMANDER MFG. CO.
4220 WEST KINZIE ST., CHICAGO 24, ILL.

Product of Commander — Builder of the Commander Tapper

Mention Item NED-6061 when writing

CLEAN YOUR MACHINES WITH

NON - INFLAMMABLE, NON - TOXIC

PENETONE SENIOR

One tiny electric spark can cause disaster in a room filled with solvent fumes. You don't need inflammable or toxic solvents to clean your machines, floors, tools, or parts. PENETONE SENIOR takes care of 85% of your cleaning jobs *without risk of fire and without toxic fumes.*

Find out about this modern liquid cleaner now in use by the country's leading industries. It's safe on all surfaces—wood, concrete, and composition floors, painted walls, and all metals including aluminum.

Send for *performance-proven* Field Service Reports on Plant Maintenance and Direct Contact Degreasing.

THE PENETONE CO.
BOX ND 949 TENAFLY, N. J.

Mention Item NED-6062 when writing

BETTER METERS AT LOWER PRICES MEAN THE BEST BUY FOR YOU •

LOOK AT THESE NEW LOW PRICES

NOW . . . more than ever Triplett gives you your best buy in meters, all with time-tested features, including famous Triplett Double-Bridge Construction; special pole piece design for the best accuracy and sensitivity; alnico V magnet; plus the finest engineered components, many of which are made in our own plants.

Representative Prices—3-Inch Panel Style
Model 321-T D.C. Microammeters

0-20, $13.60		0-50, $10.90
0-100, $10.40	0-500, $8.30	0-200, $8.90

For detailed information see your distributor or write . . .

TRIPLETT ELECTRICAL INSTRUMENT COMPANY
Bluffton, Ohio, U. S. A.

In Canada: Triplett Instruments of Canada
Georgetown, Ontario

Precision first...to Last
TRIPLETT

Mention Item NED-6063 when writing

Geneva ECONO-MITE
DISC WHEELS ARE
"Cost Cutters"

TWO NEW SIZES!
PUNCTURE PROOF!
PROMPT DELIVERY!

Offering two entirely new disc wheel sizes with puncture proof semi-pneumatic tires 5x1.75 and 14x4.00.

WHEEL FEATURES
• Precision assembly of tire on wheel • Wheels made to Tire and Rim Association standards • Adequate "safety factor" strength • Wide range of bearing types and sizes • The perfect meshing of tire lugs into the wheel lugs prevents tire slippage.

SEND TODAY FOR LITERATURE AND PRICES

We manufacture many other sizes of disc wheels not shown also spoke and cast wheels.

GENEVA METAL WHEEL CO.
402 RAILROAD STREET • GENEVA, OHIO, U.S.A.
SOLD TO MANUFACTURERS OF PORTABLE EQUIPMENT ONLY

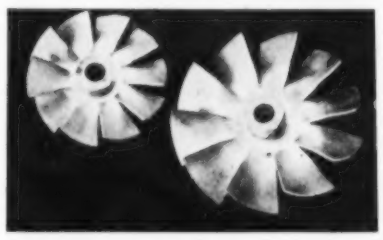
Mention Item NED-6064 when writing

HOLDING TOOL
precision vise positions small parts

Consisting of fixture and vise, Mikro-Vise No. 10 has jaws which are 1⅛ in. wide and open to 1¼ in. Holding fixture makes possible setting angular, horizontal and vertical positions. It has two V's of different sizes and insert pins for holding odd-shaped parts. Fixture locking lever is adjustable. Made by **Metal Items,** Dept. N-7, 820 Sixth St., Racine, Wis.

Mention Item NED-6065 when writing

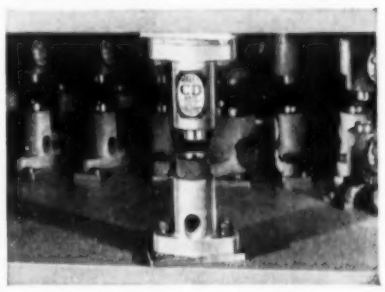
TEN-BLADE FANS
available in aluminum or steel



Measuring 2¼ and 3 in. in size, these fans are suitable for cooling or ventilating where space is limited and maximum air flow is desired. With blades pitched for either direction of air flow, they are available with hubs, extrusions or plain center holes with bores up to 11/16-in. They can be supplied with plating or finish to meet requirements. Made by **Electro Engineering Products Co.,** 4826 W. Kinzie St., Chicago 44, Ill.

Mention Item NED-6066 when writing

ADAPTER SETUP
facilitates mounting standardized hole punching equipment



Adapter setup method eliminates necessity of large ground steel plates and accurate hole drilling equipment and also assures extreme accuracy of hole locations by mounting and permanently doweling type CD hole punching units to die set. In addition, it permits use of units in combination with blanking and forming dies and provides easier mounting for permanent dies. Each punch and die assembly is independent and self-contained.

Only four steps are required to mount units in die set with adapters. Mounting screw holes in die set are drilled and tapped, punch assemblies are mounted in position and doweled, die and punch assemblies are aligned with locator ring and dowel, and gages are located. Type CD units punch round or shaped holes up to 1½ in. in diameter in ⅛-in. mild steel. Made by **Wales-Strippit Corp.,** 363 Payne Ave., North Tonawanda, N. Y.

Mention Item NED-6067 when writing

PRECISION—
as well as finest alloy steel account for the unequalled Strength, Durability, Dependability and economy of

DIX
UNIVERSAL JOINTS

14 sizes, bores 3/16" to 2"; overall length 1¾" to 10⅝".

Widest distribution and longest, severest service attest their unmatched quality. Exceed even rigid requirements of Army, Navy and Air Corps specifications.

• Concentricity: Guaranteed within .0005.
• Grinding: To infinite degree of accuracy. No binding, backlash or inplay of pins.
• Flush Rivets: Ground flush with the body for close quarters at no extra cost.
• Greater Angle of Operation: No loss of strength. Max. bearing surface.
• Alloy Steel: Highest grade for max. strength, min. weight.
• Heat Treated.

Write for fully descriptive literature.
Mfd. by

LOVEJOY FLEXIBLE COUPLING CO.
Also Lovejoy Flexible Couplings and Variable Speed Transmissions.
5003 W. Lake St. Chicago 44, Ill.

Mention Item NED-6068 when writing

WEBB "TOWVEYOR"
FLOOR TYPE TOW CONVEYOR
USES STANDARD SHOP TRUCKS

FAST—operator drops pin in slot, walks away . . . no loading time lost. CLEAR FLOOR—no obstacles . . . truck over it easily. FLEXIBLE—can be routed as required . . . trucks disengaged anywhere along route.

The Webb Towveyor is a new type conveyor with chain running in a slot below the floor. Standard shop or warehouse trucks, either 2 or 4-wheel, are used. Simple towing pin mechanism is bolted or welded to front end. Trucks may be engaged at any point . . . disengaged anywhere for loading or unloading.

Slashes warehouse handling costs—write for "Towveyor" folder, or recommendations.

JERVIS B. WEBB COMPANY
8951 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
CONVEYOR ENGINEERS AND MANUFACTURERS

Mention Item NED-6069 when writing

FOR EFFICIENT
TRAMP METAL SEPARATION

IT'S THE
Homer
PERMANENT NON-ELECTRIC
MAGNETIC SEPARATOR
LINE

PLATES
PULLEYS
DRUMS
PNEUMATIC HUMPS
LIQUID TRAPS
PORTABLE UNITS

Regardless of the type of tramp metal separation you need . . . there is a HOMER Permanent Magnetic Separator to suit your needs. Let our Engineers recommend the separators you require.

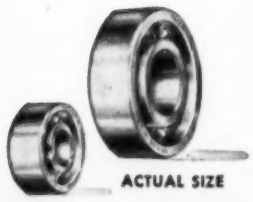
Bulletins available upon request.

Homer The HOMER MANUFACTURING CO., Inc.
Dept. 1-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

Mention Item NED-6070 when writing

The Practical Solution to Your Small Bearing Problems...



NORMA-HOFFMANN Small BEARINGS...

When designs call for *small* bearings, *specify* and *use* Norma-Hoffmann Small Bearings. These small precision bearings are engineered to give efficient, trouble-free service for years on end. They are extra quiet in operation . . . require little if any maintenance . . . improve the performance of the product.

Write for catalog describing these *small* bearings as well as other Norma-Hoffmann Bearings. They are available in a wide range of types and sizes from ⅛" to 22½" bore.

NORMA-HOFFMANN
Precision BEARINGS
BALL • ROLLER • THRUST
NORMA-HOFFMANN BEARINGS CORPORATION
STAMFORD, CONN.

Mnetion Item NED-6071 when writing

...the air you breathe, that is

when you wear a Dupor No. 40 U.S.B. of M Approved Respirator. More than 40 sq. in. twin filters provide plenty of clean air regardless the dust hazard. Controlled breathing—panorama vision—no blind spots—makes this the favorite of users everywhere! Order today from . . .

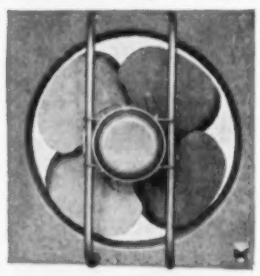
H. S. COVER, SOUTH BEND, IND.

DUPOR no. 40 Sample Sent **$2.50** pp

Mention Item NED-6072 when writing

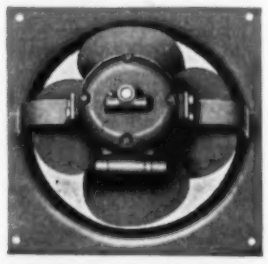
Prompt Deliveries on *Peerless* Exhaust Fans

A number of sizes and models of Peerless exhaust and ventilator fans are now available for prompt shipment. This is your opportunity to meet your needs with fans of proven performance, attractive design and quiet operation—all carrying the famous Peerless name and powered with Peerless Motors. Send us your requirements.



DE LUXE FANS

Here is an *extremely quiet,* variable speed, attractively designed fan for stores, restaurants, hotels and similar installations. Totally enclosed motors exclude dirt and moisture. Fans may be mounted vertically or horizontally. Supplied for single speed, two-speed, or three-speed operation. Finished in Buckingham grey. 16" to 30" sizes.



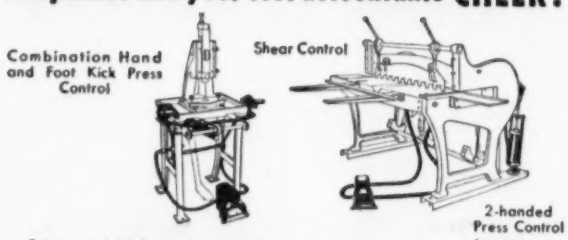
SMALL VENTILATOR FANS

These fans provide plenty of air movement for homes, small grills and offices. Motors are totally enclosed. Fan and panels finished in Buckingham grey. Sizes—10-inch 6 blade; 12- and 16-inch 4 blade; 12-inch multiblade.

THE *Peerless* ELECTRIC CO.
WARREN, OHIO

Mention Item NED-6073 when writing

***How to make employees, insurance companies and your cost accountants* CHEER!**



It's easy! Take a few minutes *now* to look around your shop. Make a note of every power press, kick press, or shear where old-fashioned, tiring manual or other clumsy controls can be replaced by economical Schrader Pneumatic Controls. Call in a Schrader distributor, get an estimate and SCHRADERIZE YOUR SHOP.

Watch smiles come back to employees' faces, accidents and costs come down!

Write for Complete Information About Schrader Pneumatic Controls.

Schrader PRODUCTS CONTROL THE AIR

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
478 Vanderbilt Ave., Brooklyn 17, New York

Please send me information about Schrader Pneumatic Controls.

Name of Company _____

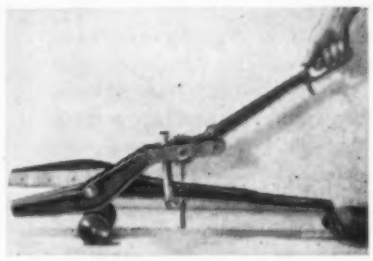
Your Name _____

Street Address _____

City _____ *Zone* ____ *State* _____

Mention Item NED-6074 when writing

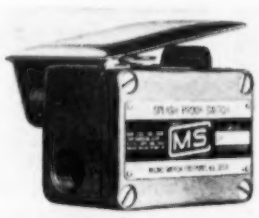
METAL-CUTTING SHEAR
cuts up to ⅛-in. sheet steel



Use of compound leverage, rack and gear enables Super-Shear to cut sheets, rods and bar stock up to ⅛-in. thick and even heavier sections of nonferrous metals. In cutting larger sheets, shear is placed on floor, supported by rollers attached to lower jaw and held in position by foot pedal. Handle can be operated by one or both hands. Rack and gear can be disengaged to use tool as straight hand shear. For bench use, lower handle is held in vise. Made by **Super Mfg. Co.,** Dept. 9, Chicago 24, Ill.

Mention Item NED-6075 when writing

PRECISION SWITCH
heavy duty model is splashproof



While designd for locations subject to splash of water, oil and coolant, model OP-AR50 actuated precision switch is especially advantageous where operator safety demands two-hand control. Gasketed cover plate and closely-fitted actuator shaft protect enclosed mechanism from entrance of dust or dirt. Single-pole double-throw contacts are rated 15 amp on 125-460-v ac. Made by **First Industrial Corp.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

Mention Item NED-6076 when writing

FLOOR MARKER
easily operated with one hand

Recommended for marking car parking areas, guiding industrial traffic or for designating aisles in warehouses, Little Giant Hand-Liner line marker can make straight, curved continuous or skip lines and lettering. Visible paint flow eliminates paint waste and gives full number of lines per gallon. Unit is made of welded steel and is easily portable. It paints lines approximately 3⅞ in. wide using any good traffic paint. Unit is cleaned by flushing container, valves and brushes with gasoline or paint thinner. Set of three brushes furnished with device will paint line 1¾ miles long over average surface. Made by **Lasting Products Co.,** 200 Block S. Franklintown Rd., Baltimore 23, Md.

Mention Item NED-6077 when writing

You can grind out production records when you eliminate the dust menace with

TORIT DUST COLLECTORS

Thousands of TORIT Dust Collectors are now in use. In every type of industry they are trapping abrasive dust at its source and recirculating the cleaned air back into the room. In large plants and small they are proving economical to own and operate.

Compactly designed TORIT Dust Collectors fit all production layouts. They are now being produced in quantity, and sizes and capacities to fit all standard grinding, polishing and cut-off machines are available for immediate delivery. For complete information and the latest TORIT catalog write:

TORIT

MANUFACTURING CO.
298 Walnut St. • St. Paul 2, Minn.

Mention Item NED-6078 when writing

FOR GREATER OPERATING ECONOMY...

SEALMASTER
Self-Aligning
BALL BEARING UNITS

SEALMASTERS alone have this exclusive combination of Features

Pillow Blocks
Take-Up Units
Flange Units
Cartridge Units
Flange Cartridge Units

- **Positive, Permanent Seal**—Patented centrifugal seal retains lubricant and keeps out dirt.
- **Self-Aligning**—SealMasters simplify mounting. Shaft misalignment cannot distort seal.
- **Pre-Lubricated**—SealMaster bearings are shipped with lubricant sealed in, ready for immediate service.
- **Patented Locking Pin**—Prevents rotation of outer race in housing . . . permits several degrees of shaft misalignment and positions unit for relubrication.

Write for SealMaster Catalog 845

STEPHEN S-ADAMSON Mfg. Co.
12 Ridgeway Ave., Aurora, Illinois — Los Angeles, Calif. - Belleville, Ont.

Factory Representatives and Dealers in All Principal Cities

Mention Item NED-6079 when writing

13 ADVANTAGES OF HARPER

NON-FERROUS AND STAINLESS STEEL

EVERLASTING FASTENINGS
IN YOUR PRODUCT OVER COMMON STEEL

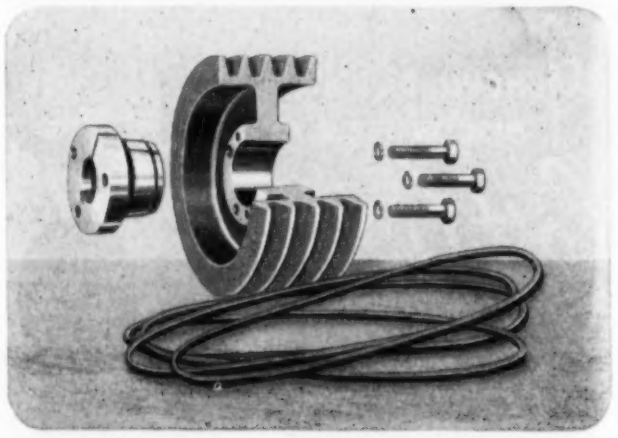
1 Resistance to Rust and Corrosion 2 Resistance to High Temperatures 3 Non-Magnetic 4 Non-Sparking 5 Re-Usable 6 Attractive Appearance 7 Easy to Clean 8 High Strength 9 Long Life 10 Lower Ultimate Cost 11 Resistance to Fatigue 12 Easy to Plate or Finish 13 Resistance to Abrasion and Wear

6000 SIZES IN STOCK . . . BRASS, BRONZES, COPPER, MONEL AND STAINLESS STEELS

Write for 134-page Color Catalog
THE H. M. HARPER COMPANY
General Offices and Plant
Morton Grove, Ill. (Suburb of Chicago)
New York Office and Warehouse
200 Hudson Street, New York 13
BRANCH OFFICES Atlanta, Cambridge, Cincinnati, Cleveland, Dallas, Denver, Detroit, Grand Rapids, Los Angeles, Milwaukee, Oakland, Philadelphia, Pittsburgh, St Louis, Seattle, Toronto (Canada)
EVERLASTING FASTENINGS

HARPER

Mention Item NED-6080 when writing



Efficient Transmitters of Power

Wood's **"SURE-GRIP" V-BELT DRIVES**

Perfectly matched in quality and performance, Wood's V-Belts and V-Belt Sheaves deliver constant, uniform speeds. With equal efficiency, they absorb both overloads and fluctuating surges of power . . . increase production and reduce costs of maintenance. Complete engineering data is contained in our new V-Belt Drive Catalog, No. 192—write for it today.

T. B. WOOD'S SONS CO.
CHAMBERSBURG, PA.

Mention Item NED-6081 when writing

CUT FILLING COST

WITH AN S-A BOX CAR LOADER!

It's the fast, *safe*, low-cost way to load and trim box cars...or throw to storage bins and piles...one man, operating part time, can load 100-150 tons per hour...without entering car except to direct the stream of material into each end of car...loader handles dry chemicals, fertilizer, sand, coal or other pulverized, granular or small lump material up to 2" in size. Offset high handling costs...complete details on two standard sizes given in *Box Car Loader Bulletin No. 240.*

STEPHEN S-ADAMSON MFG. CO.

Tellevel-Bin Level Controls · Car Loaders · Car Pullers · Winches · Saco Speed Reducers · SealMaster Ball Bearings

12 RIDGEWAY AVE., AURORA, ILLINOIS

Mention Item NED-6082 when writing

CHECK YOUR PLANT for these SAVINGS with LORAINS

PLANT ERECTION • Use your Lorain to build new plants, make plant additions; do extensive plant remodeling.

HANDLING RAW MATERIALS Use your Lorain to give faster, more efficient service on outside warehousing and material handling.

MAINTENANCE • Use your Lorain to give a lift on the heavy maintenance jobs inside and outside your plant.

HANDLING SCRAP • Use a magnet on your Lorain when it will give you the best material handling result.

HANDLING FINISHED PRODUCTS Stocking, "order-picking" and loading out finished products. Your Lorain will do them all faster, cheaper.

Write for new bulletin "Lorain, Jack of All Material Handling." The Thew Shovel Co. Lorain, Ohio

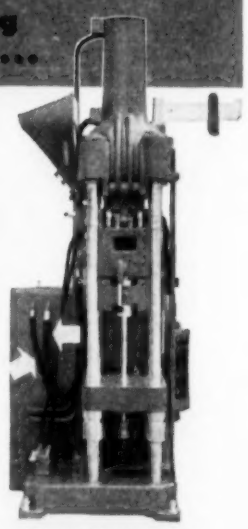
THEW Lorain CRANES FOR INDUSTRY

Mention Item NED-6083 when writing

CMH FLEXIBLE MACHINE TOOL CONDUIT

FOR SAFE, DEPENDABLE wiring under all conditions...

Consisting of a rugged flexible metal hose liner with a durable synthetic cover, CMH Machine Tool Conduit meets the severest requirements for the wiring of all types of machinery. It is extremely flexible...liquid tight...unaffected by vibration...and has a smooth metal bore that prevents excessive abrasion. Sizes ⅜" through 2", cut lengths or mill lengths. May be used with standard rigid conduit fittings. Write for full details.



CMH Machine Tool Conduit used on a Giddings and Lewis Injection Molding Machine.

CMH CHICAGO METAL HOSE CORPORATION
MAYWOOD, ILLINOIS
Plants at Maywood, Elgin and Rock Falls, Illinois

Mention Item NED-6084 when writing

ETCHING ATTACHMENT
magnetic ground simplifies marking

Added flexibility and reduced operator fatigue result from use of magnetic ground contact developed for use with Etchtool electric marking equipment. Capacities of 100 and 200 amp are available. Permanent magnet incorporated in unit assures adequate ground contact regardless of shape or size of object being marked. Made by **Luma Electric Equipment Co.,** 1112 Dorr St., Toledo 1, O.

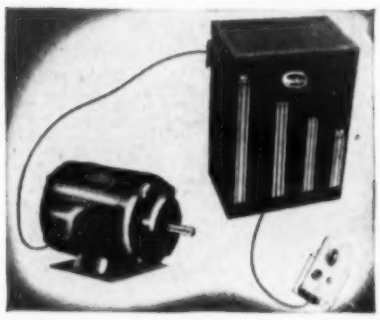
Mention Item NED-6085 when writing

DIAL PRESSURE GAGE
3½-in. size has 10,000 psi capacity

Added to line of dial gages, this 3½-in. size is made with Korex steel bourdon tube and is particularly adaptable for ammonia ice machines, pumps, compressors and hydraulic presses up to 10,000 psi. Constructed without gear teeth, gage has stainless steel bearings, fused joints and external pointer adjuster. Other sizes in line have 4½, 6 and 8½-in. dials. Made by **American Chain & Cable Co.,** Helicoid Gage Div., Bridgeport 2, Conn.

Mention Item NED-6086 when writing

VARIABLE SPEED DRIVE UNIT
available in ratings of ¼ and ½-hp



Allowing remote stepless speed adjustment and control for fractional horsepower loads and with ac power, Dyna-Speed electronic motor control unit consists of rectifier cabinet, remote control dial box, 10 ft of connecting cable and matched dc ball bearing motor. By setting speed control dial knob, any speed within range greater than 20:1 can be maintained substantially constant regardless of load changes. Constant torque is also maintained over entire speed range. Both armature and field of motor are supplied with power from full-wave gaseous rectifier. Idle switch on control box can be used to turn motor on and off without changing or disturbing speed setting. Time delay switch protects tubes during initial warm-up period. Applications include drives for presses, conveyors, lathes, mixers and other machinery requiring speed control and adjustment during operation. Made by **Brown-Brockmeyer Co.,** 1002 Smithville Rd., Dayton 1, O.

Mention Item NED-6087 when writing

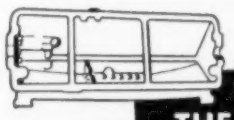
Casting Around For Something In The Way Of A Casting...?

Then angle for one that's a lightweight

★ Like Well-Cast aluminum or magnesium castings...They're light (magnesium is 75% lighter—aluminum 35% lighter than iron). They're easy to machine. They're tough.

Well-Cast puts your product out in front with a modern metal...lightweight, featherweight.

We can show you new ways to put light metals to work on your product. 37 years of know-how. *Write for Catalog No. 47.*



Well-Made Patterns

THE WELLMAN BRONZE & ALUMINUM CO.

2563 EAST 93rd STREET • CLEVELAND 3, OHIO

Mention Item NED-6088 when writing

To select the proper drive for any type of service

GET your copies of the latest Cleveland catalogs for full information on all types and sizes of worm gear speed reducers—including rating tables, dimensional diagrams and data for both standard and fan-cooled units. Ask for Catalog 200 for standard drives and Catalog 300 for Speed-aire (fan-cooled). The Cleveland Worm & Gear Co., 3283 E. 80th St., Cleveland 4, O.

For personalized service: Write or phone John E. Millikan Cleveland exch. VUlcan 3-4560

CLEVELAND Worm Gear *Speed Reducers*

Mention Item NED-6089 when writing

JUST THINK OF THE JOBS YOU CAN DO WITH THIS STURDY, LOW-COST PULLER

LIFTS OR PULLS at any angle up to 12,000 POUNDS

¾ ton model weighs only 13 lbs. One of the handiest tools ever devised. Does thousands of lifting and pulling jobs. Eliminates unsafe, makeshift methods. Gets work done fast. Costs very little. Pays for itself in countless ways. *Ask your distributor to demonstrate it for you.*

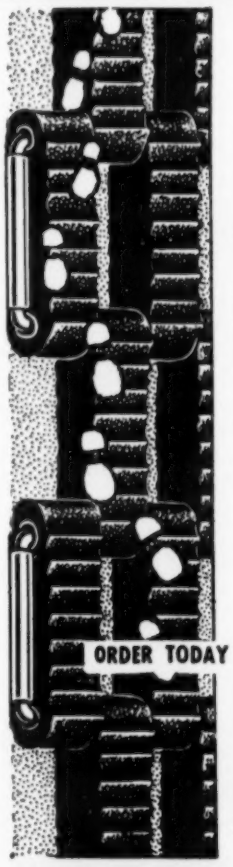
4 sizes ¾, 1½, 3 and 6 ton

Write for this folder

Equipped with famous HERC-ALLOY flexible, welded alloy steel chain.

CHISHOLM-MOORE HOIST CORPORATION
(Affiliated with Columbus McKinnon Chain Corporation)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
SALES OFFICES: New York • Chicago • Cleveland • San Francisco • Los Angeles

Mention Item NED-6090 when writing



SAFE DURABLE
reduce worker fatigue
AKRO-MATS

Made of especially tough, rubber composition links ⅝" thick on 12 gauge galvanized spring wire, this floor covering gives positive under-foot traction on wet, oily, greasy and other slippery surfaces.

Extra resilient Akro-mats help to reduce worker fatigue and accidents, increase efficiency.

Special or stock sizes lie flat, roll up easily for cleaning. Open accounts invited.

NO.	SIZE	PRICE EACH
3000	14" x 21"	$2.50
3001	16" x 24"	3.75
3002	18" x 29"	4.90
3003	22" x 35"	7.50

Size to specification: $2.00 per sq ft.

ORDER TODAY DIRECT OR SEND FOR COMPLETE DATA

A DEPENDABLE GUIDE TO SAFETY
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS
2702 W. Huntington St, Philadelphia 32, Pa.

RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

Mention Item NED-6091 when writing

Fuller

WAXES and POLISHES FOR { PROTECTION BEAUTY ECONOMY

A thin coating of Fuller Floor Wax protects your floors — makes them look better — AND cuts your daily cleaning costs. Use less cleaner — less elbow grease — less time. Your Fuller industrial representative can recommend the type — liquid or paste — best suited for your requirements. Ask him, too, about Fuller Furniture Polish and Fuller Metal Polish to protect and improve the appearance of your furniture and equipment.

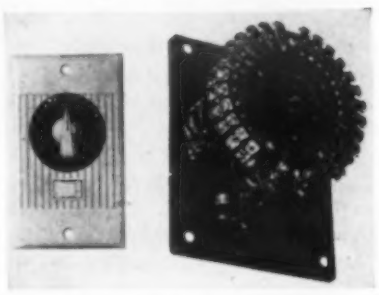
Phone your local Fuller Branch Office or write

The FULLER BRUSH CO.

INDUSTRIAL DIVISION, 3530 MAIN ST. HARTFORD 2, CONN.
In Canada: Fuller Brush Company, Ltd., Hamilton, Ontario
Mention Item NED-6092 when writing

LIGHTING CONTROLS

selector switch and master contactor operate on 24-v control circuit



Selector switch shown at left is multipole rotating type mounted on single-gang plate and includes one single-station lever operated 'off' and 'on' switch. Rotating member is two-circuit nine-station manually operated device and can be used for selective control as well as master control. Since unit is relatively inexpensive, it may be used as master control in small installations not justifying expense of motor driven-type master contactor.

Designed for 24-v system, master control contactor consists of two stationary contacting disks mounted on common frame. Movable contact arms are driven by 24-v 60-cycle motor which operates at approximately 15 rpm. Contacting disks each have 24 points of contact, 23 of which can be used to control low voltage relays of master system, and other as clearing contact to motor. Since running current of motor is approximately 320 ma at 24 v, no additional transformer is required. Made by **Square D Co.**, Western Div., 4335 Valley Blvd., Los Angeles 32, Calif.

Mention Item NED-6094 when writing

MAGNETIC SEPARATOR

for automatic removal of tramp iron from wide variety of products

Furnished complete with shaft and V-belt drive sheave, Perma-Drum type nonelectric Alnico magnetic separator can be installed at discharge end of chutes, spouts and conveyors for processing feed, rubber, glass, chemicals, plastics, minerals, foods, coal, sand, textiles and other types of products. Features include circumferential pole design for uniformity of magnetic field across drum width, adjustable dual purpose leveler and burden feed control. Nonmagnetic manganese alloy steel drum shell revolves on sealed self-aligning ball bearings, while magnet inside drum shell remains stationary. Nonmagnetic material flows over drum shell in normal trajectory. Tramp iron holds fast to drum by magnetic pull and drops off when it passes out of magnetic field. Also available are enclosed type models. Made by **Dings Magnetic Separator Co.**, 4758 W. Electric Ave., Milwaukee 14, Wis.

Mention Item NED-6095 when writing

JUST 7 INCHES HIGH

THE DUFF-NORTON "Shorty" JACK
LIFTS HEAVY LOADS IN LOW HEIGHTS

Yes . . . the new "Shorty" Jack is just 7" high and weighs only 22 lbs.—yet it will lift heavy loads weighing up to 15 tons. Note the low height application at left in which 3 jacks were used.

Write today for Bulletin AD-12

THE DUFF-NORTON MANUFACTURING CO.
Main Plant and General Offices: PITTSBURGH 30, PA. Canadian Plant: TORONTO, ONT.
"The House that Jacks Built"
Mention Item NED-6097 when writing

KEEP YOUR DOORS closed when not in use

NP PRE-ENGINEERED Pneumatic DOOR OPERATORS

SPEED UP material handling . . . isolate dust, fumes and fire hazards . . . reduce costs of air-conditioning and heat . . . increase productive time of employees, with N. P. air-powered Door Operators. They embody the same dependable N. P. Air Engines used to open and close the car doors of the great metropolitan subways throughout the world.

Write for Bulletin DC-102

NATIONAL PNEUMATIC COMPANY
Industrial Sales Div. • Rahway, N. J.

Pneumatic Specialists Since 1904

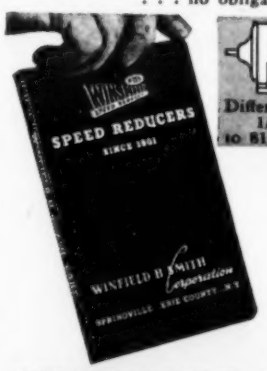
Mention Item NED-6093 when writing

MOTTO for 1949

DO IT FOR LESS with WINSMITH SPEED REDUCERS

Economy
IN FIRST COST IN SPACE SAVING
IN OPERATION IN LONG LIFE

Let us consult with you regard to COST-SAVING . . . no obligation.



Send for Our Latest POCKET-SIZE CATALOG

It covers our complete line . . including the new, space-saving patented Winsmith Differential Speed Reducer. Gives ratios, horsepower, torque, overhung load capacities . . . Includes valuable reference material and comprehensive Engineering Section. For Catalog 148, please write on your letterhead stating position.

WINFIELD H. SMITH CORP.
A Speed Reducer for Every Application
22 Eden St. . . . . SPRINGVILLE . . . . Erie County . . . . N. Y.
Mention Item NED-6096 when writing

ARBOR BEARINGS and COLLARS

AVAILABLE FOR IMMEDIATE SHIPMENT

ARBOR BEARINGS

Kearney & Trecker Arbor Bearings are available for all standard style A and style B milling machine arbors in both outer support and intermediate support bearing lengths.

ARBOR COLLARS

Kearney & Trecker Arbor Collars are available for all standard style A and style B milling machine arbors, in lengths of 1/4" — 5/16" — 3/8" — 1/2" — 3/4" — 1" — 1 1/4" — 1 1/2" — 2" and 3".

For complete information on arbors, cutters, and other tools for milling and boring write for new catalog C-10D.

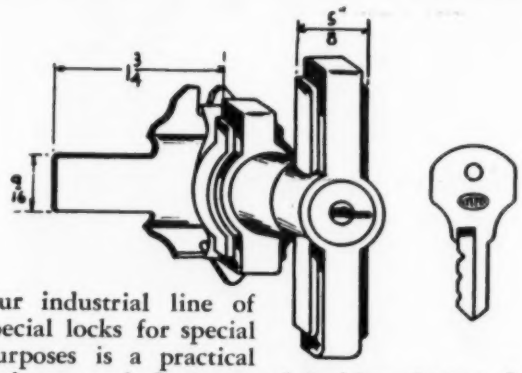
KEARNEY & TRECKER MILWAUKEE MACHINE TOOLS

KEARNEY & TRECKER CORPORATION
6748 West National Avenue
Milwaukee 14, Wisconsin

Mention Item NED-6098 when writing

CORBIN Lock Engineers

CAN FURNISH ANY KIND OF A LOCK FOR ANY KIND OF A PURPOSE



Our industrial line of special locks for special purposes is a practical and economical source of locking devices for intricate and unusual applications. Call on Corbin lock engineers for anything that needs locking.

Our Industrial Catalog is yours for the asking.

CORBIN CABINET LOCK DIVISION
The American Hardware Corporation
NEW BRITAIN, CONNECTICUT

Mention Item NED-6099 when writing

NEW! LOW PRICED PRECISION MADE MULTI-PURPOSE CAM PRESS

• This sturdy press provides accuracy not obtainable with ordinary arbor press. Ideal for small parts production runs.

Write today for special bulletin.

Bed 3⅝" x 4"
Die Space—Stroke up 3⅝"
Length of Stroke ¾"
Capacity 1½ tons

THE PERFECT BENCH TOOL FOR

PUNCHING BENDING
RIVETING DRAWING
FORMING STAKING
SIZING NIBBLING
UPSETTING ASSEMBLING

Price Only $42.00 F.O.B. Marshalltown

MARSHALLTOWN MANUFACTURING CO.
MARSHALLTOWN, IOWA

Mention Item NED-6100 when writing

Announcing . . .

An Educational Service on Files and Filing

(FREE TO EFFICIENCY-MINDED INDUSTRIAL CONCERNS)

Shake hands with a "walking encyclopedia" on files and filing—Walter R. Buerckel of the Nicholson field service staff. His lecture on "*How to Select and Use the Right File for the Job,*" illustrated by slides, has helped to increase filing efficiency in many of the largest industrial plants. It is simple enough for trainees to understand, yet technical enough to interest and help experienced foremen, machinists and plant engineers.

Write for full details and a date with Mr. Buerckel

We know you will appreciate that in offering a lecture service of this type it may be difficult, and in some cases impossible, to meet all requests, due to conflicts in dates and itineraries. Schedules are now being made up for the winter season. If you have a group which should hear Mr. Buerckel, communicate with us immediately.

NICHOLSON FILE COMPANY
34 Acorn St., Providence 1, R. I.

Mention Item NED-6101 when writing

acid users— BIG SAFETY SPECIAL!

only $24.95

for WAHLERT SAFETY CARBOY DRAINER & TILTER purchased in combination

STOP SPLASH—SAVE MONEY

Acid can't spill, can't splash when you use Wahlert Safety Carboy Drainer with Tilter. Air vent assures steady flow—eliminates pumping or siphoning. Carboy Drainer is made in three sizes, to fit all standard carboys. (Mention O.D. of Carboy neck when ordering). $12.20 each.
5 gal. or 13 gal. Carboy Tilters, each $16.00.
Act Now! Save money, save injury, by ordering this Specially Priced Drainer and Tilter Combination!

Write for descriptive folder today!

WAHLERT SAFETY PRODUCTS CORP.
5 DeKalb Avenue, Brooklyn 1, N. Y.

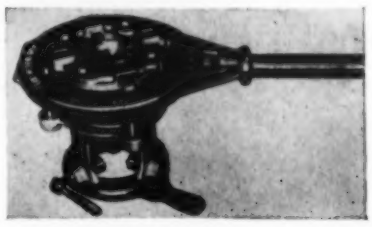
Mention Item NED-6102 when writing

DUST SEPARATOR
twin cyclones afford large capacity

Equipped with 5-hp 3450-rpm end-mounted motor, No. 219 twin cyclone dust separator develops 2100 cfm at velocity of 6000 fpm against 3-in. static pressure. Reservoir has capacity of about 4½ cu ft and is equipped with 15½-in. high pull-out drawer. Overall height of unit is 90 in., width is 35 in., and depth is 29½ in. Separator has 8-in. inlet and 10-in. exhaust outlet. This model is available only for outdoor exhaust and not for indoor recirculation. Made by **Torit Mfg. Co.,** 292 Walnut St., St. Paul 2, Minn.

Mention Item NED-6103 when writing

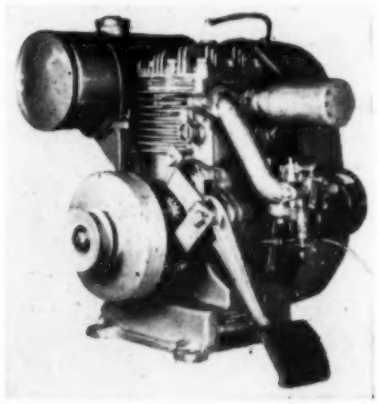
DIE-STOCK
for threading 1 to 2-in. pipe



Equipped with Acme thread lead screw in place of National coarse thread form, this No. 52 Leader ratchet type receding die-stock employs universal centering chuck. Three fully serrated jaws and locking screw of chuck assure quick accurate centering of pipe. Die holders are separate units fully adjustable for oversize or undersize threads and replaceable when necessary. Made by **Oster Mfg. Co.,** 2066 E. 61st St., Cleveland 3, O.

Mention Item NED-6104 when writing

AUTOMATIC CLUTCH
for air-cooled gasoline engines



Comprised of drive flange assembly in which three cast iron shoes pivot and drum that is faced with internal molded lining, this automatic clutch is designed for Husky air-cooled engines. Drive flange assembly is keyed to engine crankshaft and when driven, shoes throw radially outward by centrifugal force to engage drum. Extension type springs delay engagement of clutch until engine has accelerated to 1450 rpm. It becomes fully engaged at 1750 rpm. Clutches can be obtained with 12-tooth No. 40 chain sprocket, B-section V-pulleys or suitable for the welding on of special equipment. Made by **Cushman Motor Works, Inc.,** Lincoln 1, Neb.

Mention Item NED-6105 when writing

No more need for costly lapping. Instead, use this inexpensive method of honing to exact size. Abrasive element removes stock, corrects ovality or taper, produces micro-inch quality finish. Accurate size on any material from turned or ground surface. Very simple, fool-proof, trouble-free design; no specialized skill or lengthy training required (just move the hone back and forth over the revolving surface). Four sets cover range from 1/16" to 1" diameter.

Ask for Bulletin 300-N

Delapena
Exclusive Sales Representatives in U. S. A.
MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO

Mention Item NED-6106 when writing

USE J&L HEAT-TREATED

J&L STEEL

JALLOY STEEL

—wherever wear and abrasion are limiting factors in the life of equipment.

&L Jalloy—a fine-grain, heat-treated steel—has an nherent ability to withstand impact and abrasion. A wide range of physical properties, with strengths up to *180,000 lbs. per sq. inch,* are available.

Its outstanding wear-resistant properties make it especially useful for Scrapers . . . Rock crushers . . . Bulldozers . . . Truck bodies . . . Dump cars . . . Chutes . . . Power-shovel buckets.

You'll find it profitable to use J&L heat-treated Jalloy Steel. Write for free copy of our booklet "Jalloy—J&L Alloy Steel."

JONES & LAUGHLIN STEEL CORPORATION
456 Jones & Laughlin Building • Pittsburgh 19, Penna.

Mention Item NED-6107 when writing

THIS NEW AEROCOR* INSULATION IS THE GREATEST THING YET...

Has many uses . . .

High in insulating efficiency, low in cost . . . Fiberglas* Aerocor will find many uses around your plant. Particularly suitable for insulating irregular surfaces.

Use Aerocor to hold heat or cold in their places. Use it to deaden noise. Use it on liquid lines with steam tracers.

Fiberglas Aerocor is a soft, flexible, blanket-type insulation that is easily cut to size with scissors or a knife, can be secured in place with mechanical fasteners or by adhesives. Is easy to apply in tight spots, and expands to original size once pressure is released.

It's fire-resistant, too . . . the glass fibers that form Aerocor cannot support combustion or sustain rodents and vermin, will not rot, won't settle under vibration.

Available in rolls of various widths, thicknesses and densities. For the name of your nearest supplier,

Write to:
OWENS-CORNING FIBERGLAS CORP.
Dept. 920, Toledo (1), Ohio

OWENS-CORNING FIBERGLAS

*FIBERGLAS *(reg. U.S. Pat. Off.) and Aerocor are the trademarks of Owens-Corning Fiberglas Corporation for products made of or with glass fibers.*

Mention Item NED-6108 when writing

Don't BURN Paper CONVERT IT!

AIRFLUFF PAPER SHREDDER MAKES EXCELSIOR OUT OF CONFIDENTIAL PAPERS, BLUEPRINTS OR ANY WASTE PAPER

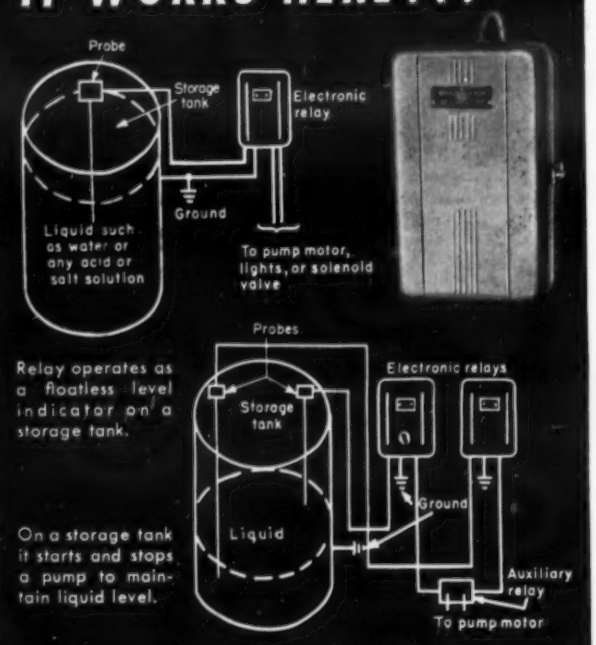
Here's the machine that destroys paper yet saves it! The AIRFLUFF Paper Excelsior Shredder, easily shreds, separates and fluffs old newspapers, confidential papers, blueprints, magazines, waste paper, corrugated cartons, tissue, Cellophane and waxed paper. Low price, simple to install. Power and maintenance cost less than 2c per 100-pound bale. Absolutely safe—present employees can easily operate. Cuts in widths from ⅛" to ⅜". Model No. 14 shreds 600 to 1800 lbs. per hour. Model No. 10 shreds 200 to 800 lbs. per hour. Write today for prices and complete facts about these remarkably simple, sturdy and efficient new AIR-FLUFF Paper Shredders.

See our insert and listing in Thomas Register.

MITTS & MERRILL • SAGINAW, MICH.
1000 SOUTH WATER STREET
BUILDERS OF MACHINERY SINCE 1854

Mention Item NED-6109 when writing

IT WORKS HERE...

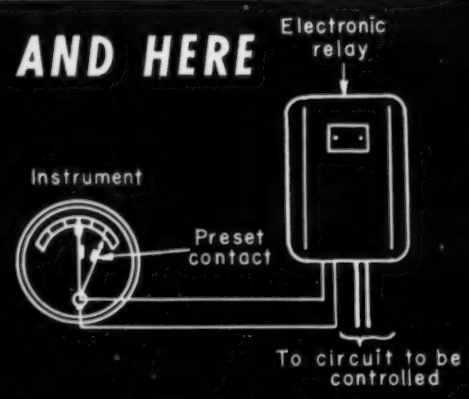


what's YOUR problem?

This G-E ELECTRONIC RELAY counts, gages, tests conductivity of solutions, controls liquid level, detects breaks in threads—used wherever a power circuit must be controlled from a low-current or high-resistance contact. It operates with as much as 5 megohms in the actuating circuit and as little as 0.004-second contact time. Easily installed and serviced. Suitable for indoor or outdoor applications.

Diagrams are of a few industrial applications where this relay is being used. Bulletin GEA-4214A gives more details. Write now or contact the nearest G-E office. *Section Q730-4, Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

...AND HERE



Acts as a contact amplifier for delicate instruments. Because of the small amount of power required for operation, instrument contacts are not overloaded—do not weld or stick because of arcing.

G-E ELECTRONIC RELAYS

GENERAL ELECTRIC

Mention Item NED-6110 when writing

PNEUMATIC VIBRATOR
for quick attachment and removal

This type UH pneumatic vibrator can be quickly attached to and removed from units that require vibration such as concrete forms, mold boxes, hoppers and foundry flasks. Although unit is designed for applications where vibrator installation cannot be permanent, its mechanism is capable of withstanding continuous usage. It can be obtained in 2-in. piston diameter size and operates on 50 to 100 psi continuous line pressure. Number of vibrations per minute and their intensity can be controlled by regulating air pressure. Device weighs 14 lb, measures 6¾ x 4 x 3½ in. and is equipped with swivel hose fitting designed to receive ½-in. ID hose. Made by **Cleveland Vibrator Co.,** 2744 Clinton Ave., Cleveland 13, O.

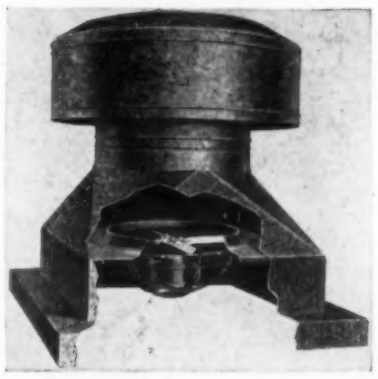
Mention Item NED-6111 when writing

DRUM LIFTER
handles open and closed steel drums

Handling of open and closed steel drums in vertical position by crane or hoist is facilitated by this drum-lifting device. It is of all-steel construction with heavy welded chain and ring for crane hook attachment. Made by **Palmer-Shile Co.,** 16015 Fullerton Ave., Detroit 27, Mich.

Mention Item NED-6112 when writing

ROOF VENTILATOR
round type for general application



Recommended for general ventilation and to relieve miscellaneous hot spots of industrial and commercial buildings, Valvent roof ventilator can be obtained as gravity or powered unit. It is made in throat sizes of 12, 18, 24, 30 and 36 in. and as powered unit has capacity which varies from 630 to 25,700 cfm. Combination damper and inverted-cone air-guide direct outgoing air with least possible friction and permit any degree of opening desired. While standard construction is of galvanized steel, it can be made also in other metals to meet special conditions. Made by **Swartwout Co.,** 18519 Euclid Ave., Cleveland 12, O.

Mention Item NED-6113 when writing

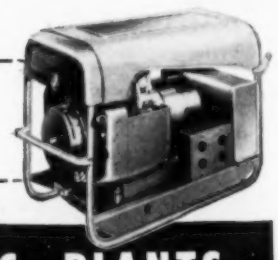
1 MAN CAN DO THE WORK OF A CREW...

with an

ONAN *Portable* **ELECTRIC PLANT**

Use fast-working, cost-cutting electric tools on every job. Lightweight Onan air-cooled electric plants supply power *anywhere* for lights, drills, saws, planers and other motor-driven tools. Carry 'em, wheel 'em or truck 'em right to the spot and plug in for all the power you need.

D. W. ONAN & SONS INC.
3693 Royalston Ave., Minneapolis 5, Minn.



A.C. MODELS: *350 to 35,000 watts.*
D.C. MODELS: *1200 to 15,000 watts.*
DIESEL PLANTS: *2,500 to 55,000 watts.*

Write for Folder

Onan PRODUCTS **ELECTRIC PLANTS**

Mention Item NED-6114 when writing

SOLDER PRE-FORMS

SPEED ASSEMBLY

STANDARDIZE

SAVE MONEY

Step up production — bring costs in your shop down—with solder pre-forms. Pre-formed rings, washers, pellets, discs, etc., made to your order, insure better bonds, lower costs, and faster assembly. We can supply you with custom-made pre-forms of any shape required, in a wide variety of solders, copper and brazing alloys.

Write for complete information.

Soldering Specialties
Dept. A, Summit, N. J.

Mention Item NED-6115 when writing

DESIGNED for Low Cost INSTALLATION · OPERATION MAINTENANCE

Dustube pays off . . . in efficiency, in power savings, simple maintenance and low cost operation. Cloth tube filters trap even the finest dust particles with nearly 100% efficiency. Freely suspended tubes last longer because they are never under tension . . . there are no abrading metal contacts to cause wear or corrosion. Inspections are fast and simple from the clean air side. Infrequent tube replacements take one man, using no tools, only seconds. Lower back pressure results in power savings. It will pay you to investigate "plus values" like these. Write for catalog 72-A.

American dustube
WHEELABRATOR & EQUIPMENT CORP. DUST COLLECTORS
508 S. BYRKIT ST., MISHAWAKA 8, IND.

Mention Item NED-6116 when writing

ACCURACY OF POSITION

- COMPACT • SIMPLE • RUGGED
- WELL-BALANCED ENGINEERED DESIGN WITH BUILT-IN INHERENT STABILITY
- FORCE BALANCE TYPE OF POSITIONER
- AVAILABLE WITH AND WITHOUT BY-PASS
- USEABLE AS REMOTE POSITION INDICATOR

FOR COMPLETE SPECIFICATIONS AND DETAILS, WRITE FOR FISHER BULLETIN E-3500.

FISHER GOVERNOR CO., Marshalltown, Iowa

Mention Item NED-6117 when writing

Increased Insulation

BETTER CONNECTIONS,

JONES BARRIER TERMINAL STRIPS

Leakage path is increased—direct shorts from frayed terminal wires prevented by bakelite barriers placed between terminals. Binder screws and terminals brass, nickel-plated. Insulation, black molded bakelite. Finest construction. Add much to equipment's effect.

Jones Means Proven Quality

Illustrated: Screw Terminals—Screw and Solder Terminals—Screw Terminal above Panel with Solder Terminal below. Every type of connection.

Six series meet every requirement: No. 140, 5-40 screws; No. 141, 6-32 screws; No. 142, 8-32 screws; No. 150, 10-32 screws; No. 151, 12-32 screws; No. 152, ¼-28 screws.

Catalog No. 17 lists complete line of Barrier Strips, and other Jones Electrical Connecting Devices. Send for your copy.

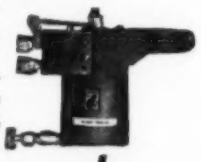
HOWARD B. JONES DIVISION
Cinch Mfg. Corp.
1026 SOUTH HOMAN AVE. CHICAGO 24, ILL.

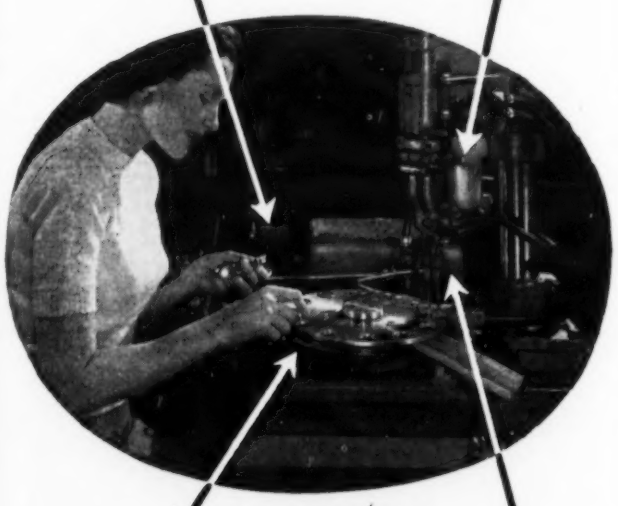
▲ Mention Item NED-6118 when writing ▲

DESIGN FOR FASTER BETTER CHEAPER PRODUCTION

MEAD MASTER VALVE:
Starts and stops entire system.

MEAD PNEUMATIC DRILL PRESS FEED:
Mounts on quill—feeds drill down to pre-determined stop, then withdraws.

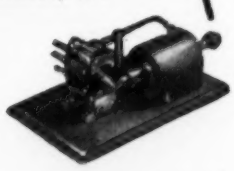




MEAD ONE MAN FACTORY

. . now makes many "nuisance" jobs *semi-automatic!* Various other Mead units described in the catalog may be combined to handle a wide variety of projects. Write for new Mead Air Power Catalog describing Air Cylinders, Air Hammer, etc.

MEAD ROTARY WORK FEEDER:
Indexes at regulated speed, holds and ejects work pieces. Operator merely loads. Extra dials can be tooled for other jobs.

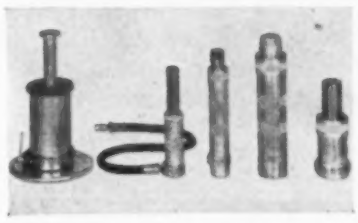


MEADMATIC TIMER:
Controls output per minute, maintains pneumatic interlock, blows away chips, etc.

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. NA-99, CHICAGO 41, ILL.

▲ Mention Item NED-6119 when writing ▲

POWER RAM
operated by hand or foot pressure



Recommended for gear and wheel pulling, removing and installing shafts and bearings, moving and leveling machinery and general industrial repair work, Step-Draulic hydraulic power ram is foot-operated, and both hands of operator are free for setting up and operating equipment. Rams varying in capacity from 2 to 12 tons are designed for maximum working pressures of 10,000 psi. Ram can be obtained in lengths from 1½ in. collapsed to 15-7/16 in. extended, with mounting threads for conventional tools. It has plated finish, and plunger and spacing anvil are case hardened. Made by **J. O. Stephenson Foundry & Mfg. Co.**, 550 E. Fort St., Detroit 26, Mich.

▲ Mention Item NED-6120 when writing ▲

MINIATURE TACHOMETER
does not contact rotating element

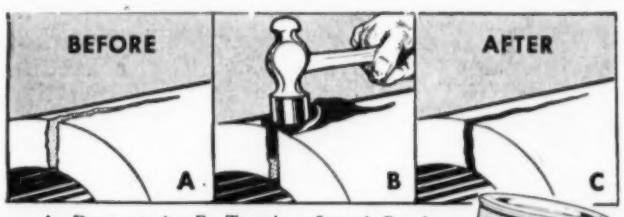
Speed checks can be made quickly and accurately with this miniature Frahm Resonant-Reed tachometer which operates by touch or permanent mounting. It does not require contact with rotating element and imposes no load on machine under test. Instrument measures vibration as well as rpm and can be obtained in various ranges from 1000 to 13,000 rpm. It cannot be injured by overspeed and does not require any maintenance. Cases are available to accommodate one or three instruments, or 60 or 90-degree brackets can be obtained for permanent mounting. Made by **James G. Biddle Co.**, Dept. No. 31-35-20, Philadelphia 7, Pa.

▲ Mention Item NED-6121 when writing ▲

GRANITE SURFACE PLATE
is accurate within 0.00005-in.

Available in wide range of standard sizes from 24 x 30 in. up, Velsey granite surface plates are suitable for accurate inspection, layout or set-up work. In addition to being nonmagnetic, rustproof and nonwarping, plates retain their flatness and are harder than tool steel. Also available is caster equipped stand which lends portability and extends use of plate. Distributed by **Elkro Co.**, 738 Albany St., Dayton 8, O.

▲ Mention Item NED-6122 when writing ▲



A—Deep crack. B—Tamping Smooth-On in. C—Crack completely sealed.

If You've Never Used SMOOTH-ON, *read this:*

Smooth-On No. 1 Iron Cement is a metallic powder which you mix with water to the consistency of putty. You tamp it, while still soft, into a crack or hole, making sure to force it against all surfaces. With Smooth-On you don't need to use heat or special gadgets. As it hardens, it expands slightly, clinging tightly in place. The repaired part is ready for use as soon as Smooth-On sets hard. Keep Smooth-On handy for both emergency and routine maintenance repairs. Buy it in 1-, 5- or 20-lb. size. If your supply house hasn't Smooth-On No. 1, write us.

FREE 40-PAGE REPAIR HANDBOOK

Shows many industrial and home repairs made with No. 1 and other Smooth-On Cements. Leaks stopped, cracks sealed, loose parts made tight. 170 illustrations. Drop us a line for YOUR free copy.

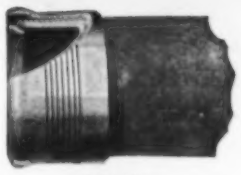
SMOOTH-ON MFG. CO., Dept. 10J
570 Communipaw Ave., Jersey City 4, N. J.

SO-293

Do it with **SMOOTH-ON**
THE IRON CEMENT OF 1000 USES

▲ Mention Item NED-6123 when writing ▲

WEDGE PROTECTORS will protect valuable parts in PROCESS, STORAGE or SHIPPING



HEAVY PROTECTOR

LIGHT GAUGE PROTECTOR

It doesn't pay to risk damage of valuable parts when WEDGE Protectors will protect them so economically. The WEDGE line includes plugs, caps and thread protectors of all types. We can supply the right protector for your product and if necessary make up special. Thousands of dollars of damage to parts is done in many plants that could be avoided by the use of WEDGE Protectors. Why not find out what WEDGE Protectors will do for you?

Write for Further Information

WEDGE PROTECTORS, INC.
3973 Jennings Road Cleveland 9, Ohio

Use WEDGE Chill Rings-Thread Protectors

▲ Mention Item NED-6124 when writing ▲

Solves "SMALL PARTS" Production Problems

RIVETING
PRESSING
STAKING
MARKING
PUNCHING
ASSEMBLING

- Electric push button control, hand or foot operated, through Hannifin's new exclusive fast-cycling 4-way solenoid valve.
- Guided ram. Speed easily adjustable. Automatic return.
- Removable steel base plate. Facilitates changing job set-ups through use of alternate work bases.
- Extremely rigid frame. Built to big press standards for quality.
- Cylinder *"TRU-BORED"* and honed. Long life. Minimum maintenance.

the New HANNIFIN *"Han-D-Press"* air operated!

ASK FOR NEW BULLETIN 251.

HANNIFIN CORPORATION
1101 So. Kilbourn
Chicago 24, Illinois

▲ Mention Item NED-6125 when writing ▲

Electric Eyes . . . FOR COUNTING

PHOTOSWITCH Photoelectric Counters provide the *only* answer to many counting problems. Used when output cannot be counted directly through operation of the machine itself—where temperature is too high for actual contact—where objects are too light to trip a mechanical counter—are of irregular shape, or freshly painted, and in general for counting on all types of conveyor systems. PHOTOSWITCH Electric Eye Counters are universal—not limited to one specific use. They are fast, unfailingly accurate—and easy to install.

WRITE FOR COMPLETE INFORMATION
Bulletin PA432 NED

EA-8

PHOTOSWITCH INCORPORATED
PHOTOELECTRIC & ELECTRONIC CONTROLS FOR EVERY INDUSTRIAL PURPOSE
CAMBRIDGE, MASS. *District Offices* IN ALL PRINCIPAL CITIES

▲ Mention Item NED-6126 when writing ▲

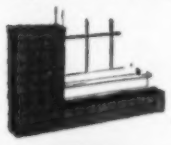
TAKE ADVANTAGE OF THIS

25% PRICE REDUCTION

12 Large Multi Drawer Units . . . NOW $11.75

Size 11 11/16 x 3 15/16" 3" deep.
less than 12—99c each were $1.29 each.

12 Small Multi Drawer Units . . . NOW $3.50



Size 5" x 2 7/8" 2 1/4" deep.
less than 12—30c each were 40c each.

Solve Your small Parts Storage Problem with All Steel Multi Drawers. Easily assembled to fit any size or shape space. Positive, Rigid Interlocking.

If your local dealer cannot supply you send your order DIRECT with check or money order.

Jobber and Dealer Inquiries Invited.

MULTI DRAWER

THE CINCINNATI VENTILATING CO.
INCORPORATED
Dept. A COVINGTON, KENTUCKY

▲ Mention Item NED-6129 when writing ▲

Pittsburgh CARGOTAINERS helped save 2067.70 man hours per month at INGERSOLL STEEL

OLD WAY NEW WAY

You may feel that small materials handling is an unimportant part of business—yet here's how Ingersoll Steel Company saved 2067.70 man hours a month* after installing pallets and Pittsburgh collapsible Cargotainers:

Formerly small parts were received from vendors in odd size barrels, kegs, cartons, boxes, burlap bags and loose. This resulted in excessive labor costs in receiving, warehousing and stock assembly lines and additional handling of parts which caused high scrap and damage loss. Lack of standardization of containers prevented proper inventory control and warehousing.

Nine months ago Ingersoll Steel standardized on pallets and Pittsburgh collapsible Cargotainers. These wire-mesh baskets were supplied to their vendors and the receiving, storing and shipping departments. Parts were uniformly stacked and better protected—excessive handling was eliminated—there was complete inventory control—a reduction in scrap loss—full utilization of storage space. This all added up to better housekeeping—safer and more efficient handling operations for both Ingersoll Steel and its vendors.

It will pay you to investigate Pittsburgh Pallets and Cargotainers. For your copy of our catalog write to Department NE, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pennsylvania.

*From "Wire Containers For Small Parts", Modern Materials Handling, December, 1948.

CARGOTAINERS by Pittsburgh Steel Products Company

A Subsidiary of Pittsburgh Steel Company

▲ Mention Item NED-6130 when writing ▲

HYDRAULIC COUPLER
operates under full dynamic pressure

Usable on all types of hydraulically actuated implements, this breakaway coupler has free swivel action under all conditions up to 4000 psi which eliminates hose line twisting and kinking, When disconnected, coupler instantly checks flow of oil under pressure, sealing both ends of line. Oil spillage at breakaway does not exceed two drops, and pressure loss is held to minimum. Standard rubber O-ring seals are used, and moving metal parts do not contact each other. Coupler can be completely serviced in field without special tools. Made by **B A Coupling Co.,** 1658-A N. Brookfield St., South Bend 28, Ind.

▲ Mention Item NED-6131 when writing ▲

ELECTRIC SANDER
for heavy-duty production

Unaffected in operation by heavy pressure, model 500 electric sander is vibrationless and runs cool under all conditions. It is powered by 115-v ¼-hp universal electric motor rated for continuous duty. Unit weighs 7 lb, provides 38 sq in. of abrasive area and is supplied in convenient metal carrying case. Made by **National Air Sander, Inc.,** 2710-12 W. State St., Rockford, Ill.

▲ Mention Item NED-6132 when writing ▲

WHEEL GROUPS
drop center disk type mounting

Usable as wheel mounting for wagons, trailers, scoops, sprayers and other forms of conveyance and portable equiment, these drop center disk wheels are available

in light, medium and heavy-duty ranges. They are supplied as group comprising rim and disk, hub, bearing cones, grease seal and cap and with bent or straight spindles. Brakes are obtainable in certain heavy-duty sizes only. Range load per wheel in light classification is 1200 to 1500 lb; medium, 1500 to 1750 lb; and heavy, 1750 to 2000 lb wheels in the several duty classifications are available for variety of tire sizes. Made by **Kelsey-Hayes Wheel Co.,** 72 LeClaire St., Davenport, Iowa.

▲ Mention Item NED-6133 when writing ▲

FLEXIBLE Stock-Keeping with PENCO Adjustable STEEL SHELVING

Penco Founded 1869 by L. Lewis Sagendorph

200 SIZES—in 4 Styles!

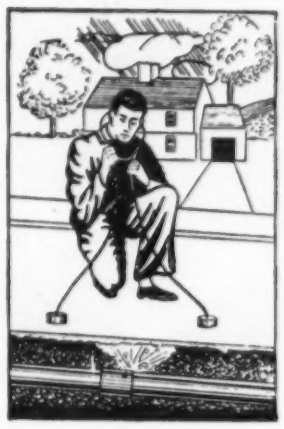
Arrange or re-arrange your storerooms at will with Penco standard *adjustable* steel shelving. Can be dismantled, erected, added to or moved at any time using simple tools. Keep pace with changing inventories or work flow. Write for catalog and *low* prices on Penco heavy duty shelving—*today.*

PENN METAL CORPORATION OF PENNA.
A Complete Line of Steel Lockers, Shelving and Cabinets
82 OREGON AVE. PHILADELPHIA 48, PA.

▲ Mention Item NED-6134 when writing ▲

GEOPHONE*

Does Away With Costly, Old-Fashioned Methods of Locating Leaks!



• MONEY-SAVING
• ACCURATE
• FAST

★ The Globe Geophone scientifically and accurately locates water and steam leaks. There's no costly, time - consuming excavation when a Geophone is used. A compact and sensitive instrument operating on the principles of the seismograph and stethoscope, the Geophone picks up and detects, even when 50 to 75 ft. away, the vibrations of the pipe break, and locates it accurately within a few minutes.

The Geophone is indispensable for Water Departments and Industrial Plants. Used also with spectacular results in mining, oil and termite fields.

Complete Geophone outfit consists of connecting tubes, two Geophone discs, headpiece and heavy leather - covered carrying case with shoulder strap. **$85**

Pipe Phones $3.70 (Aquaphone)

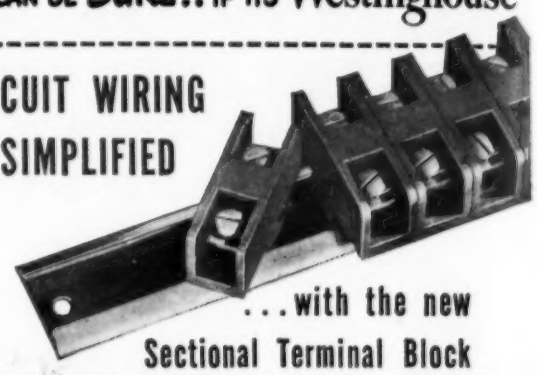
Globe Phone Mfg. Corp. READING, MASS. Dept. N

Manufacturers of Geophones Since 1918
*Registered in United States Patent Office

▲ Mention Item NED-6135 when writing ▲

YOU CAN BE SURE.. IF IT'S Westinghouse

CIRCUIT WIRING ...SIMPLIFIED



...with the new Sectional Terminal Block

Here's something completely new in terminal block design. Each Sectional Terminal Block is a complete, insulated unit which can be attached to a steel mounting channel by simply sliding it into place and turning it into position. Apply them in any number from 1 to 75, wherever a variable number of terminals are to be assembled.

Sectional Terminal Block features include:

- Pressure-type, solderless connections.
- Adding or removing terminal sections without disconnecting others.
- Available in 25 and 50-ampere sizes, for any voltage to 600 volts maximum, a-c or d-c.

For complete details send for B-4203. Write: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa., or call your nearest Westinghouse Sales Office. J-60684

Westinghouse

▲ Mention Item NED-6136 when writing ▲

NEW Bond BEVERAGE TRUCK

No. 5035

HIGH STACKING
SMOOTH ROLLING

Speed up delivery, pickup and general handling. High capacity reduces foot travel. Sturdy construction provides long service with hard usage.

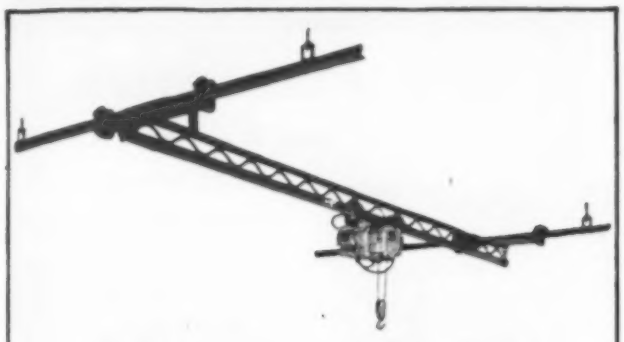
Semi-pneumatic tires and ball bearing mounted wheels assure smooth shockproof transportation for fragile loads.

Truck is full-welded tubular steel, 49 inches high, nose 14" wide by 7½" deep and weighs only 29 lbs. Equipped with stair glides. Available also with double hand grips or 10" tires.

Send for free literature on the complete line of Bond Hand Trucks.

BOND FOUNDRY & MACHINE CO.
308 Penn St., Manheim, Pa.

▲ Mention Item NED-6137 when writing ▲



Light Duty Low Cost

MONORAIL CRANE

For loads up to 1500 lbs. and a maximum space of 16 feet, this crane, with American MonoRail track for runways, makes an extremely low-cost material handling system covering maximum floor area.

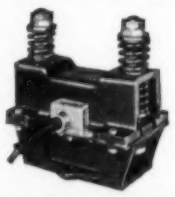
An American MonoRail Engineer will gladly give complete details without obligation. Write for Bulletin MF-1 describing MonoRail Crane developments.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

▲ Mention Item NED-6138 when writing ▲

SYNTRON

Speeds Up Bulk Material Handling



BIN VIBRATORS

Eliminate arching and plugging of bins, hoppers and chutes.

For little hoppers—to big bunkers.

VIBRATORY FEEDERS

Up to hundreds of tons per hour of bulk material—at instantly controllable rates of flow.

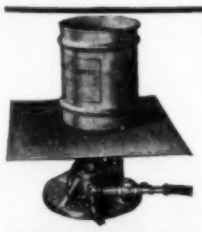
VIBRATING GRIZZLIES

Scalping and sizing various materials—for crushing oversize—provide a cushion of fines on conveyor belts, etc.

VIBRATING SCREENS

For close sizing and classification of materials.

Dedusting — dewatering and washing—with variable control of flow.



PACKERS and JOLTERS

Settle materials in forms—cans, bags, sacks, cartons and barrels.

Highspeed electric, and hydraulic jolt models.

LONG VIBRATORY CONVEYORS

For rough abrasives—hot, burning materials—enclosed to prevent contamination

Write for literature

SYNTRON CO.
405 Lexington Homer City, Pa.

▲ Mention Item NED-6139 when writing ▲

SPEED REDUCER
vertical type for turntables

Having many vertical applications, model No. VW-2 double reduction speed reducer has ½-hp input capacity and 1000 lb-in. output torque. However, capacity varies with ratio which has range of from 10:1 to 3840:1. Input shaft is ⅝-in. in diameter and output shaft is 1 in., although oversize shafts are available. Features include aluminum alloy housings, phosphor bronze gears, 20-degree pressure angle gearing and roller thrust bearings. Made by **Euclid Universal Machine, Inc.,** 15004 Woodworth Rd., Cleveland 10, O.

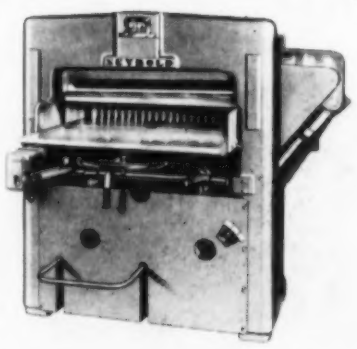
▲ Mention Item NED-6140 when writing ▲

PORTABLE GEIGER COUNTER
operates on flashlight batteries

Usable for general radioactivity survey, monitoring and prospecting purposes, this Sniffer Geiger counter weighs only 2 lb, is self-contained and easy to use. Built to withstand rough handling, it is sensitive and accurate. Two radio tubes, voltage regulator, Geiger tube and two batteries are compactly arranged in case similar in size to folding camera. List price is $34.50. Made by **Nuclear Instrument & Chemical Corp.,** 647 N. Franklin St., Chicago 10, Ill.

▲ Mention Item NED-6141 when writing ▲

PAPER CUTTER
has automatic oil-actuated clamp



Designed primarily for use in small and medium-sized shops, 34-in. Dynaclamp automatic-clamp paper cutter has 35-in. table to speed output. Clamp has mechanical motivating force but transmits this force hydraulically. Range of pressure is from 500 to 4000 pounds, easily adjustable to force desired. Transmission of motion through oil gives clamp cushioning effect upon impact with paper, reducing to minimum chance of disturbing pile. Other features of machine include shear boxes to guide knife, fool-proof safety devices and correct cutting angle and double shearing motion. Made by **Harris-Seybold Co.,** 4515 E. 71st St., Cleveland 5, O.

▲ Mention Item NED-6142 when writing ▲

Save time and labor on many jobs—wood or metal—with an American Speedy Spinner Disc Sander! Small, portable. Semi-flexible 5½" disc allows many uses of the Speedy Spinner on curved or flat surfaces. Also, complete attachments for polishing, drilling, paint mixing. Speeds up production—cuts costs! Light weight, 5 lb. 10 oz. . . . 1200 r.p.m. disc speed . . . heavy duty motor. Quality construction . . . dependable. Write for catalog and price. The American Floor Surfacing Machine Co., 524 So. St. Clair St., Toledo 3, Ohio.

AMERICAN PORTABLE TOOLS

▲ Mention Item NED-6143 when writing ▲

TO SAVE WORKERS' TIME
Add DUO-Washfountains

Bradley DUOS are so compact and easily installed that they can be placed anywhere needed throughout the plant. For added convenience and to save workers' time put DUOS in laboratories, plant kitchens, at entrances to cafeterias and in certain out-of-the-way shops.

Each DUO does the work of two ordinary washbasins and requires less space, fewer piping connections while conserving on water consumption. Besides, DUOS are tops in sanitation; there are no faucets to touch or maintain. Foot-control operation protects hands from contagious contacts. BRADLEY WASHFOUNTAIN CO., 2253 W. Michigan Street, Milwaukee 1, Wisconsin.

Distributed Through Plumbing Wholesalers.
Write for free Catalog 464-D.

BRADLEY Duo Washfountains

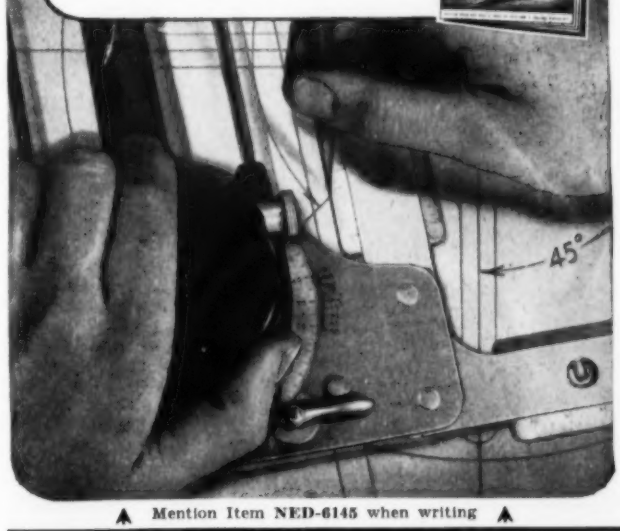
▲ Mention Item NED-6144 when writing ▲

Simplify your work—use Bruning Drafters

Actual tests prove Bruning Drafters may save up to 40% of the draftsman's time. Fewer motions are needed because this machine combines T-square, straightedge, triangle, protractor, and scales into one precision instrument. Fatigue is lessened, accuracy is increased.

Send today for complete details and free literature on Bruning Drafters.

Charles Bruning Co.
4730-48 Montrose Ave., Chicago 41, Ill.



▲ Mention Item NED-6145 when writing ▲

STAINLESS TUBING DATA

on
- Velocity Constants
- Mass Velocity Constants
- Cross Sectional Areas of I. D. and O. D.
- Sq. Ft. Internal and External Surface Per Lineal Ft.
- Physical Properties
- Available Sizes

Return the coupon today for your Carpenter Stainless Tubing Slide Chart.

THE CARPENTER STEEL COMPANY
Alloy Tube Division • 118 Springfield Rd., Union, N. J.

NAME _____ TITLE _____
(Please Print)
COMPANY _____
(Firm Name Must Be Given)
ADDRESS _____
CITY _____ ZONE _____ STATE _____

▲ Mention Item NED-6146 when writing ▲

For MONEY-SAVING Machine Installation

. . . support your noisy equipment on ISOMODE* PADS

You don't need costly bases to cushion the blows of hard-hitting machines—Isomode Pads often do it with only a single thickness! And you can also eliminate bolting in most cases—for these pads absorb vibration that makes machines "walk".

Isomode Pads also cut down noise. They protect precision machines from nearby equipment. Vibration control also means less building damage.

Loaded 50 pounds per square inch, the economical, standard 18x18" Isomode Pad gives you enough capacity for 9½ tons of machinery. They withstand oil and water seepage.

Isomode Pads are proving themselves under thousands of machines – from compressors to heavy equipment such as punch presses. More data in our bulletin No. 405.

*Trade Mark Reg. U.S. Pat. Off.

THE MB MANUFACTURING COMPANY, INC.
1066 State St., New Haven 11, Conn.

▲ Mention Item NED-6147 when writing ▲

Magna-Lock

MAGNETIC HOLDING IS *Revolutionizing* SET-UP TIME

- GRINDING
- MILLING
- SHAPING
- DRILLING
- TURNING
- PLANING

On these jobs and many others, we'll hold your work with a MAGNA-LOCK Magnetic Chuck and cut your set-up time as much as 80%. Write us today. Tell us your chucking problems. We'll help you solve them. Request complete catalog #049-1.

HANCHETT
MAGNA-LOCK CORPORATION
BOX NE-199
BIG RAPIDS, MICHIGAN

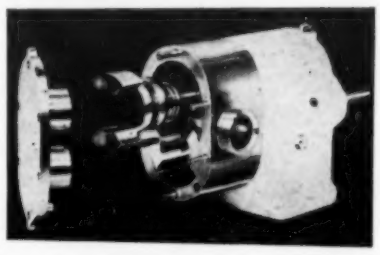
▲ Mention Item NED-6148 when writing ▲

DIAL-TYPE COUNTER
particularly suited for coil winding

Connected directly to any rotating shaft, model 51 dial counter can also be driven by flexible shaft. It is usable in coil winding, reeling, punch press and other similar work. Top hand registers up to 25 turns in increments of ¼-turn, while bottom hand registers each 25 turns up to 2500 turns. This enables unit to be used for critical work where fractional turns or revolutions are involved. Sturdy 6-inch dial, cast aluminum housing and fine-pitch spur gears are features. Made by **Geo. Stevens Mfg. Co.**, 6024 N. Rogers Ave., Chicago 30, Ill.

▲ Mention Item NED-6149 when writing ▲

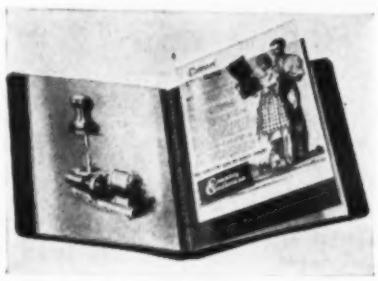
SANITARY PUMP
for handling milk and food products



This sanitary pump is available in capacities which range from 1 to 125 gpm with pump speeds from 50 to 600 rpm and with port connections from 1 to 2½ in. It meets conditions of 3A Sanitary Code which outlaws use of threads in product zone. One-piece rotor and shaft assembly eliminates internal shaft and seal threads in liquid end. Wetted parts are of stainless steel and are quickly removable for cleaning. As there is no internal metal contact or friction between rotors and housing in pumping chamber, flow settings remain constant. Made by Sanitary Pump Div., **Waterous Co.**, 80 E. Fillmore Ave., St. Paul 1, Minn.

▲ Mention Item NED-6150 when writing ▲

TRANSPARENT PLASTIC ENVELOPES
for use in three-ring binders



Containing number of Ful-Vu Mikafilm twin-wire bound window sleeves, Ring-O-Pac plastic envelopes are designed so that pack can be inserted as unit into three-ring binder. Wire binding rather than sleeves rides on ring binders, and sleeves are anchored along entire binding edge so that they will not pull loose or tear. Units can be obtained in groups of 6, 10 and 25 window sleeves with black fiber covers. Several of them can be inserted in single three-ring binder and spreads displayed side by side are held close together. Made by **Cook's Inc.**, Dept. ND, Camden, N. J.

▲ Mention Item NED-6151 when writing ▲

All these common faults are minimized or eliminated by modern product *quality control*—STURTEVANT torquing at critical points. STURTEVANT TORQUE Wrenches are *permanently accurate*. Because of their inherent design they cannot become inaccurate. Capacities from 0-8 in. oz. to 0-7200 in. lbs. Both inspection and high speed production types.

Write For Bulletin SW 22

PA STURTEVANT CO.
ADDISON QUALITY ILLINOIS

▲ Mention Item NED-6152 when writing ▲

DAVIS SOLENOID VALVES *for* —Steam, Air, Water, Oil Applications, Extreme Accuracy Sizes ½" to 12" Pressures to 1500 Lbs.

Davis No. 93 single-seated pilot operated solenoid valve. Sizes ½" to 4" for gas, steam or liquid service.

Davis Solenoid Valves are operated by any device that will make or break an electrical circuit, and are furnished either normally open or normally closed—explosion proof if desired.

Davis valves adapted to solenoid operation include: single seated valves for high or low pressure, balanced valves, butterfly valves, and 3 or 4-way pilot valves. Reciprocating or rotary Stem type. For extreme accuracy, the Davis Two-Step Solenoid Valve is available.

Write today for details

DAVIS REGULATOR COMPANY
2531 SOUTH WASHTENAW AVENUE, CHICAGO 8, ILL.

▲ Mention Item NED-6153 when writing ▲

NOW for your complete protection
FROM THE WET • GREASE • OILS • ORDINARY ACIDS

TOWER'S FISH BRAND NEOPRENE

TOWER'S protective garments prevent time losses by affording maximum protection from the wet, dampness, spraying and foul weather. TOWER'S new NEOPRENE coated garments give utmost protection by also resisting grease, oil and ordinary acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.

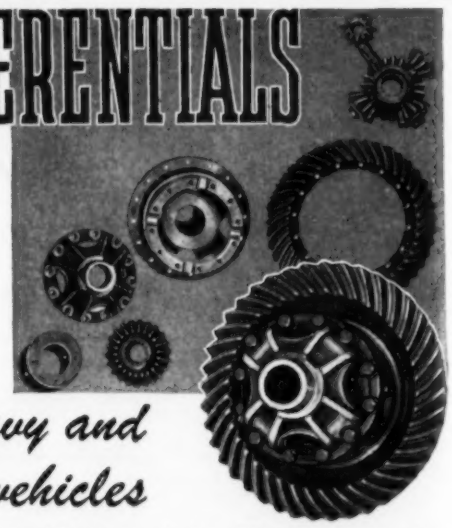
For folder of styles and detailed information write Department SF.

OILED RUBBER

TOWER'S FISH BRAND — **A. J. TOWER CO.** — TOWER'S ARROW BRAND
24 SIMMONS ST., BOSTON, MASS.

▲ Mention Item NED-6154 when writing ▲

DIFFERENTIALS



for heavy and light vehicles

FAIRFIELD is a specialist in producing differentials. By using Fairfield service, manufacturers get these benefits:

A BETTER PRODUCT. Finest production facilities, advanced engineering, and highly trained craftsmen stand back of the Fairfield gears and differentials!

MASS PRODUCTION ECONOMY. Thanks to large volume of work handled in the Fairfield factory.

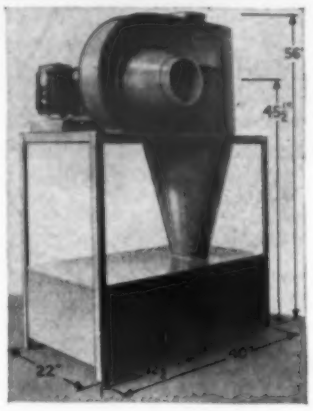
A DEPENDABLE SOURCE OF SUPPLY. Serving hundreds of large and small users of gears and differentials. Get acquainted with Fairfield's facilities. Your inquiry will receive prompt attention.

FAIRFIELD MANUFACTURING COMPANY, 317 S. Earl Avenue, Lafayette, Ind.

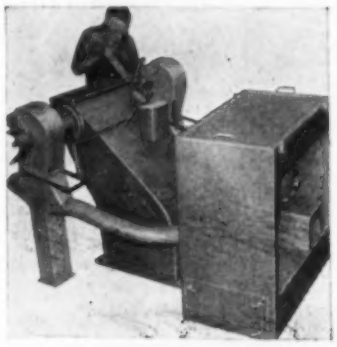
FAIRFIELD For FINE GEARS

▲ Mention Item NED-6155 when writing ▲

STOP DUSTS with DUSTKOPS



Low Cost, Efficient, compact. For recirculating cleaned air or for outside exhaust (toxic or objectionable fumes.) Twelve models (314 to 3600 cfm), to collect dust from: grinding, buffing, polishing, sanding, wire brushing, bagging, blast cleaning, trimming, woodworking, etc.



Model 20N30 — 2300 cfm — exhausts cleaned air outdoors.

Model 1150 (at left) —1400 cfm—always the best choice for Hammond VRO Polisher.

For recommendation by return mail, describe dust problem. No obligation.

New Catalog 605 now ready.

AGET-DETROIT CO.

201 Main at Washington Sts., Ann Arbor, Michigan

▲ Mention Item NED-6156 when writing ▲

For Faster Assemblies use a "YANKEE" Quick-Return Spiral Screw Driver

A push on the handle and the screw is off to a spinning start! Up with the arm and the driver is ready for the next push. Constant spring pressure keeps the bit in the screw slot. This quick-return feature of the "Yankee" Spiral Screw Driver helps one hand do the work of two, easier and faster.

Ask your Industrial Supply Distributor about these and other "Yankee" Tools that put an extra push into every job.

Write today for the "Yankee" Tool Book

Quick-Return Style Nos. 130A, 131A, 135

Standard Style (without Quick Return Spring). Nos. 30A, 31A, 35

"YANKEE" TOOLS NOW PART OF STANLEY THE TOOL BOX OF THE WORLD

NORTH BROS. MFG. CO.

Philadelphia 33, Pa.

▲ Mention Item NED-6157 when writing ▲

Here is an IMPROVED way to HANDLE MATERIALS and POSITION WORK

LYON-Raymond Hydraulic HIGH-LIFT TRUCK

Modern welded tube and formed plate construction, designed for strength, rigidity and safety. Weighs only half as much as an ordinary tiering truck of comparable capacity.

1. LIFTS & TRANSPORTS Will pick up a skid load as handily as the usual type of lift truck. Easily transports capacity loads and can be steered into any space accommodating its width.

2. SUPPORTS An adjustable support for overhanging work on drill presses, shears, cut-off machines, punch presses, etc. Serves also as a feed table for many operations. Secure floor lock.

3. LEVELS Exact leveling for changing dies in presses. Ideal for transporting heavy die sets, fixtures and tools to and from storage bins.

4. POSITIONS Adaptable to positioning work in lathes, loading and unloading heavy work from other machine tools. Quicker and safer than with a helper and chain hoist.

5. LOADS & UNLOADS One man can do the work of many in loading and unloading freight. Especially convenient where shipments are delivered to curb or where docks are not available. Hydraulic operation assures ease and safety.

6. TIERS An easily maneuvered truck, adaptable to tiering. Among other uses it serves as an adjustable work table for machining, assembly and general toolroom work.

Write for Bulletin 136.

LYON-Raymond Corporation

4104 Madison St. Greene, N. Y.

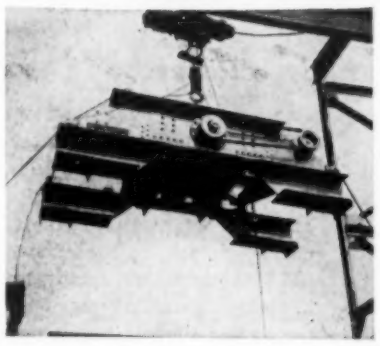
▲ Mention Item NED-6158 when writing ▲

ELECTRIC FORK TRUCK
modified models make short turns

Reduced turning radii of special models of Clipper, Carloader and Utilitruc battery powered fork trucks assures maneuverability for fast handling of materials in confined areas and narrow aisles. With capacities of 2000, 4000 and 7000 lb respectively, these machines turn in 6½, 6¼ and 6 in. less radii than standard models. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

▲ Mention Item NED-6159 when writing ▲

CAR SHAKEOUT
for hopper-bottom car unloading

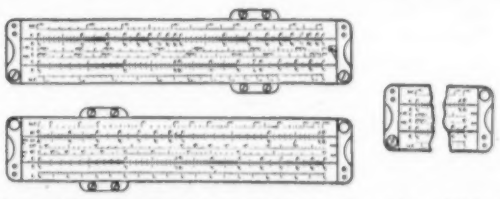


Lightweight model GS car shakeout is designed to unload up to 15 hopper-bottom cars of granular material per day. With 3½-ton or larger hoist or yard crane, unit is placed on car but not attached to it. This pushbutton controlled machine weighs 6900 lb, has 11-ft overall length, 5-ft 7⅛ in. overall width, 3-ft overall height and is powered by 10-hp motor. Made by **Hewitt-Robins Inc.**, Robins Conveyors Div., 170 Passaic Ave., Passaic, N. J.

▲ Mention Item NED-6160 when writing ▲

SLIDE RULE
6-in. log log model has 16 scales

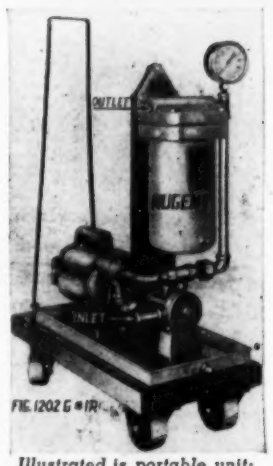
Permanent accuracy is assured in this 6-in. model 300 Duplex slide rule by dimensionally stable magnesium body. It has standard 10-in. log log scale arrangement.



Tongues and grooves are machined accurate within 0.001-in., and optically spaced graduations result in easy reading. Combination C-D scales on both sides of rule, combined with folded and reverse scales, simplify computations. List price, including leather pocket case and instruction manual, is $6.75. Made by **Pickett & Eckel, Inc.**, 1111 S. Fremont Ave., Alhambra, Calif.

▲ Mention Item NED-6161 when writing ▲

Here's the profitable answer to many filtering problems



Illustrated is portable unit; stationary units also available.

NUGENT Packaged Filtering Units

For large garages, machine shops, engine rooms, electroplating plants etc., complete, compact Nugent Filtering Units will often pay for themselves in oil savings in a very short time. Consisting of a motor, pump and filter assembly these units can be hooked up to clean oils and liquids in all types of containers. Filtering can be done either by the batch or by continuous circulation. Capacities from 0.8 gpm to 22.5 gpm. Portable or stationary models are available. Write for full details and descriptive literature.

Wm. W. Nugent & Co., Inc.

421 N. Hermitage Ave. CHICAGO, 22, ILLINOIS

Est. 1897

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . Representatives in Principal Cities

▲ Mention Item NED-6162 when writing ▲

Milwaukee SILVER ANNIVERSARY 1 H. P. 6" QUALITY SAW

Motor 115V. AC or DC.

"The POWER SAW With 1000 Uses"

FOR SPEEDY LOW COST MAINTENANCE AND ALTERATIONS IN EVERY PLANT

The wide usefulness of this time-saving tool is amazing. The 6" wood-cutting blade is standard equipment. Also available—abrasive cutting wheels for working in concrete, tile, marble, plastic, asbestos and steel.

MODEL 660 **$59.95**

Polished aluminum, telescoping guard, sawdust blower, safety switch, ball and roller bearings, helical gears . . . complete with mitering shoe, rip guide and depth gauge. America's only 1 H.P. mitering saw at this low price.

MILWAUKEE ELECTRIC TOOL CORP.

5320 West State Street, Milwaukee 8, Wisconsin

▲ Mention Item NED-6163 when writing ▲

More Hands Reach For OHMITE POWER RHEOSTATS

. . . than for all Other Makes Combined!

HERE'S WHY THEY'RE INDUSTRY'S FIRST CHOICE

ENGINEERS, designers, technicians—men who select the power rheostats for industry—know that Ohmite rheostats are smoother to operate, and give closer, more evenly graduated control. They know about the smoothly gliding metal-graphite brush, the all-ceramic construction, the windings permanently locked in place by vitreous enamel. They know that Ohmite rheostats can be depended upon for unfailing performance under the toughest operating conditions. That's why they prefer Ohmite in their products.

Thus, month after month, more Ohmite power rheostats are purchased than all other makes combined. Industry has found it *pays* to standardize on Ohmite. If you are not already using Ohmite rheostats, you will find it worth while to investigate the wide range of types and sizes available.

OHMITE MANUFACTURING CO.

4842 Flournoy St., Chicago 44, Illinois

Write on company letterhead for your copy of Ohmite Catalog and Engineering Manual No. 40.

Be Right with **OHMITE**

RHEOSTATS • RESISTORS • TAP SWITCHES

▲ Mention Item NED-6164 when writing ▲

ANNOUNCING
Trumbull's new HCI switch

Trumbull's new HCI (*High Capacity Interrupter*)—Type A Safety Switch has an extremely high momentary current capacity. It withstands heavy short circuits without damage. It was designed for use with modern high-capacity distribution systems.

More first-time features

"Circuit breaker" interrupting action breaks heavy loads quickly and safely . . . Center-front operation permits close ganging . . . Front fusing allows compact box, yet gives ample wiring space . . . No exposed live parts when switch is OFF and door is open . . . Clear ON and OFF markings both inside and outside.

HCI switches are available in 30-, 60-, 100-ampere sizes . . . Underwriters' approval throughout. Write for copy of Bulletin TEC-10 today.

TRUMBULL (T) ELECTRIC

THE TRUMBULL ELECTRIC MANUFACTURING COMPANY
Plainville, Connecticut

TRUMBULL'S TRAINLOAD OF NEW PRODUCTS

▲ Mention Item NED-6167 when writing ▲

WAB Controls are a proven means of governing a wide variety of functions, from a simple "push-pull" operation to precise positioning. Successfully serving on production machines, hoists, cranes, excavating equipment, oil drilling rigs, boats, etc. Illustrations show only a few of the many devices available. Ask for Bulletin 9481-1 for full details.

Westinghouse Air Brake Co.

Industrial Division: Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES
CONSULT YOUR CLASSIFIED DIRECTORY

▲ Mention Item NED-6168 when writing ▲

NEO-CORD COUNTER-TRED
SAFETY MATTING

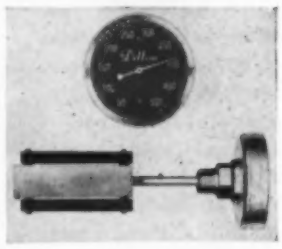
Combines Gro-Cord, exclusive cord-on-end construction with Dupont Neoprene to provide the world's greatest non-slip material. Ridges on the top and bottom faces afford drainage and aeration.
Long wearing under heaviest traffic.
Resists animal fats, vegetable and fish oils, chemicals, hot soapy water, polishes, lactic acids, gasoline, kerosene, heat and sunlight—all enemies of rubber.
Reduces fatigue, speeds up production.
Made in sections which are heat vulcanized together to form strips 23¾" wide and of any length in 12½" multiples.

AMERICAN MAT CORPORATION
"America's Largest Matting Specialists"
1733 Adams Street, Toledo 2, Ohio

( ) Please send prices on Neo-Cord Counter-Tred Safety Matting.
Please send information on ( ) Ameriflex Flexible Wood Link Matting; ( ) Tuf-Tred Tire Fabric Matting; ( ) American Counter-Tred Safety Matting; ( ) Ezy-Rug Colored Rubber Link Matting; ( ) Tile-Top Sponge Matting.
Name .....
Firm .....
Street .....
City & State .....

▲ Mention Item NED-6169 when writing ▲

MAGNETIC THERMOMETER
utilizes bimetallic element in stem



Magnets on flat stem of this thermometer enable operator to place it on flat surface so that it quickly indicates temperature of surface under test. Such applications include checking electric flat irons, griddles, transformers, engine blocks, air ducts and exhaust ports. It can be screwed also into tanks, kettles and steam lines by removing magnetic portion of stem. Suitable mounting nuts are provided for this purpose.

Made of 18-8 stainless steel, it can be obtained with dial sizes from 1 to 5 in. in diameter, stems ranging from 3 to 42 in. long and calibrated in either Fahrenheit or Centigrade in nine different temperature ranges. Instrument is accurate to within 1 per cent of full scale reading and will withstand 3476 psi. Made by **W. C. Dillon & Co.**, Dept. NED, 5410 W. Harrison St., Chicago 44, Ill.

▲ Mention Item NED-6170 when writing ▲

BROACHING KIT
facilitates keyway cutting in wide range of bore diameters

Consisting of 1-in. diameter Glenny broach, four interchangeable cutting blades, five eccentric bushing-type adapters and sturdy metal carrying case, this standard SB-50 broach kit facilitates keyway cutting in wide range of bore diameters. Blade widths are ⅜, ¼, 9/32 and 5/16-in.; and eccentric adapters permit keyway cutting in bores of 1⅛, 1-5/32, 1-3/16, 1-7/32 and 1¼ in.

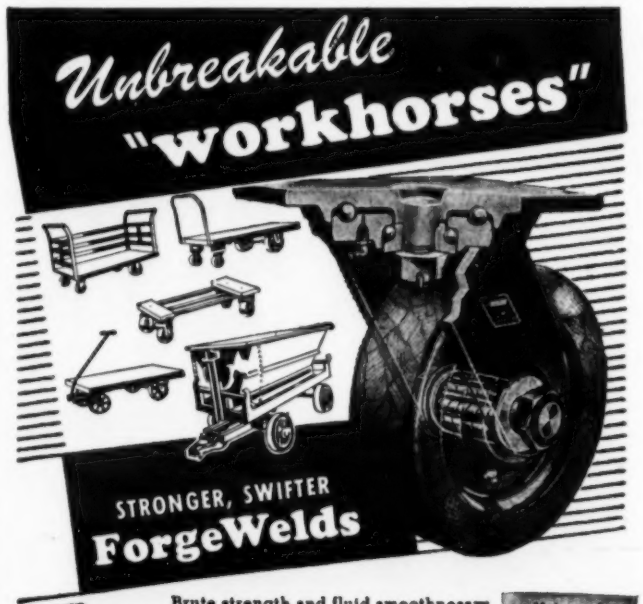
Kits can be obtained equipped with standard ⅜, ⅝, ¾, 1 or 1¼-in. diameter broaches. Quick adjustment feature of broach permits keyways of infinitely variable depths to be cut with one broach; 1-in. broach in kit illustrated will cut keyways ranging from 0.030 to 5/32-in. in depth. Keyway depth is controlled by end nuts which move blade back and forth in taper-milled slot in broach body. Once blade has been set, end nuts are hand-tightened to lock blade in position for production operations. Made by **Kase Machine Co.**, 18434 Buffalo Ave., Cleveland 19, O.

▲ Mention Item NED-6171 when writing ▲

DO YOU KNOW?

■ DEPICTING the need for citizens to awaken to the dangers inherent in indifference toward civic duty, 16-millimeter sound motion picture entitled "The Price of Freedom" is available for free showings. Purpose of this film is to recreate the desire to preserve individual freedom and to aid in recognizing attempts to encroach on that freedom. Prints can be secured from National Association of Manufacturers, 943 National Bank Bldg., Detroit 26, Mich.

▲ Mention Item NED-6172 when writing ▲



Brute strength and fluid smoothness—you get *both* in ForgeWelds. Day-in and day-out—under heaviest loads and relentless pounding—these extra-tough casters keep rolling on. And how they roll! Hauling units equipped with ForgeWelds glide along on the finest ball bearing swivels and roller bearing wheels . . . speed up handling in *any* plant. What's more, once these "workhorses" are on your trucks, replacements will be rare indeed. ForgeWelds come in all types and sizes for all needs.

Makers of
Power Lift Trucks
Hand Lift Trucks
Lifters • Cranes
Dollies • Skids
Trucks & Trailers
Casters • Wheels

SERVICE CASTER & TRUCK CORP.

INDOOR MILES

Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
See your classified Telephone Directory for name of nearest Service Distributor

▲ Mention Item NED-6173 when writing ▲

FMC FLAT TOP STEELBELT

We'll gladly send a sample of this all-purpose STEELBELT, used for conveying every kind of product. See for yourself how rugged it's made, how easy to splice, how flexible in operation, how easy to clean.

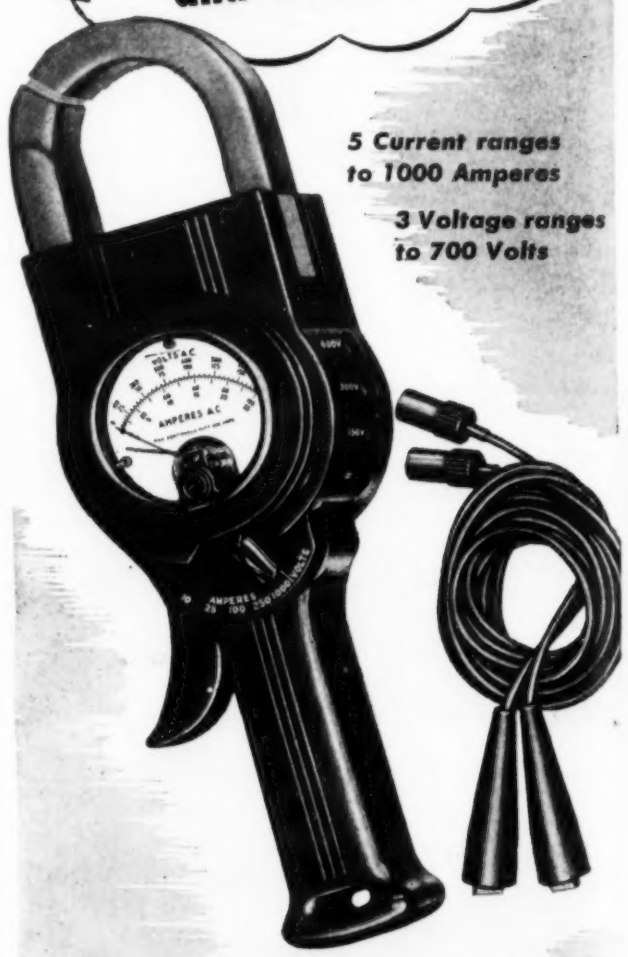
fmc

FOOD MACHINERY AND CHEMICAL CORPORATION
ANDERSON-BARNGROVER DIV. General Sales Office SAN JOSE 5, CALIFORNIA
SEATTLE • PORTLAND • LOS ANGELES • HOOPESTON, ILL. (SPRAGUE-SELLS DIV.)

▲ Mention Item NED-6174 when writing ▲

HERE'S THE NEW . . .

WESTON A-C Clamp-Ammeter and VOLTMETER



Voltage terminals recessed, with insulated screw-type connectors on leads • Heavily insulated jaws accommodate conductors to 2" dia. (bare or insulated) • Pointer stop for indicating motor starting currents • Trigger operation for convenience.

Ask your Weston representative for full particulars, or write . . . WESTON Electrical Instrument Corp., 617 Frelinghuysen Ave., Newark 5, N. J.

WESTON *Instruments*

▲ Mention Item NED-6175 when writing ▲

For Positive Filtration

on all industrial oils, solvents and water

With an Alsop "Disc-Pak" Filter on your line, all of the liquid will be as clean and as sparkling as you specify. The enormous filter area yet small floor space requirement, the self-sealing principle, the elimination of complicated parts and the ease with which used cartridge elements can be removed, guarantees positive filtration with minimum get-ready time and operating costs.

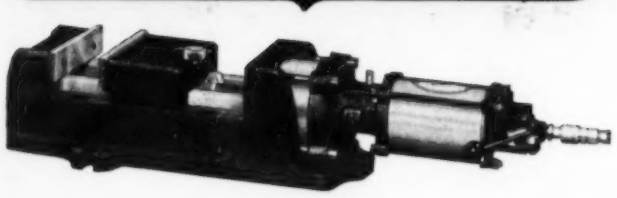
The replaceable-cartridge type elements are available in eight different grades from coarse, fast flowing to ultra-fine grades to remove particles in the submicron stage. "Disc Pak" Filters are made in full range of sizes and capacities up to 3600 g.p.h.

Send for this Free Catalogue:
Alsop Engineering Corporation
409 East Road, Milldale, Conn.

ALSOP ENGINEERING CORPORATION
Filters, Filter Discs, Pumps, Tanks, Mixers, Agitators

▲ Mention Item NED-6176 when writing ▲

NEW AIR-HYDRAULIC
MILLING MACHINE VISE
Develops
15,000 LBS. PRESSURE



THE Bellows Air-Hydraulic Vise develops a clamping pressure of 150 times operating air line pressure. Jaw width — six inches. Jaw opening adjustable up to 5".

The Air-Hydraulic Vise is complete with either a built-in mechanically operated valve for hand operation or for mechanical synchronization to machine movement, or with the built-in Bellows low voltage solenoid operated valve for electrical operation. One flexible hose only air connection required.

Write for Bulletin 761, Dept. NED 945

925

The Bellows Co.
AKRON 9, OHIO

▲ Mention Item NED-6177 when writing ▲

RUGGED PROTECTION over workers' personal glasses

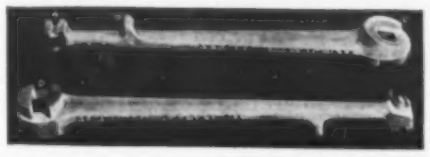
Known as the "321R," this goggle worn over personal glasses provides the ideal protection needed for short periods. Adjustable rigid bridge can be easily fitted to all pupillary distances and faces and won't unfasten or slip. Serrations in eyecups and side perforations minimize fogging, provide ventilation. Non-corroding retaining rings slotted for extra ventilation. This comfortable goggle may be had with 50 mm Super Armorplate or 6 Curve Super Armorplate clear or Calobar lenses in medium, dark, or extra dark shades. Your nearest AO Safety Products Representative can supply you.

American Optical COMPANY
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

▲ Mention Item NED-6178 when writing ▲

STEEL DRUM WRENCH
fits any size drain plug or seal ring

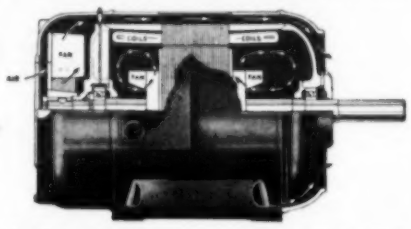


Of one-piece construction, Saf-T-Plug wrench has no moving parts, requires no adjustments and is tapered at angle of operation to provide hand clearance. It will service large filler or small drain plugs, compound or double type plugs and seal cap rings. Wrench is heat treated, cadmium plated and balanced for ease of handling. Its 18-in. leverage provides sufficient torque for difficult jobs. Wrench is priced at $5. Made by **Wm. C. Richards Co.**, 3102 W. Vermont St., Blue Island, Ill.

▲ Mention Item NED-6179 when writing ▲

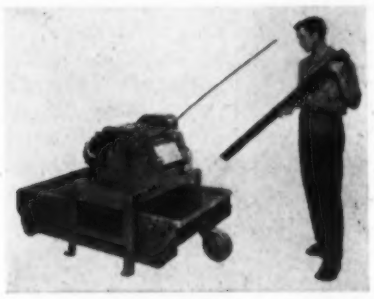
TOTALLY ENCLOSED MOTOR
sizes range from 2 to 60 hp

Small fan blades on rotor of type TEFC electric motor circulate air which is drawn through external hood over stator core and out over pulley bearing. During this process, heat is transferred from rotor and stator to frame and endbells. Actual temperature rise on stator windings will not exceed 55° C under full load operation. Ball bearing temperature rise in motor does not exceed 30° C. Motor is polyphase 50 or 60-cycle constant-speed continuous-duty squirrel-cage induction type with high starting torque and low starting current. Made by **Valley Electric Corp.**, Dept. 116, 4221 Forest Park Blvd., St. Louis 8, Mo.



▲ Mention Item NED-6180 when writing ▲

SCRAP CHOPPER
especially suited for foundry use



Rotating blade of this automatic scrap chopper has 1½-in. offset that controls length of pieces cut. In this 1½-in. length, exact amount of scrap that should be added to heat can be weighed out and easily shoveled into furnace or cupola. Machine is equipped with welded steel, hopper type floor truck which is easily rolled under machine to receive scrap as it is cut. When truck is filled, it holds equivalent of one ton of scrap. Removable cutting knife of hardened tool steel rotates at 72 rpm and will cut for weeks without resharpening. No jamming or pinching can occur. Any metal scrap up to ¼-in. thickness can be handled. Made by **Wenthe-Davidson Engineering Co.**, 1459 N. 31st St., Milwaukee 8, Wis.

▲ Mention Item NED-6181 when writing ▲

Tempilstiks°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

It's this simple: SELECT the Tempilstik° for the working temperature you want. MARK your workpiece with it. WHEN the Tempilstik° mark melts, the specified temperature has been reached.

available in these temperatures (°F)
125°, 138°, 150°, 163°, 175°, and so on to 400°F
400°, 450°, 500°, 550°, 600°, and so on to 1600°F

gives up to 2000 readings

$2 each

Also available in pellet or liquid form

TEMPIL CORPORATION
132 W. 22nd St., New York 11, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

▲ Mention Item NED-6182 when writing ▲

FEDERAL

SIRENS

HORNS

BELLS

For all industrial applications; shops, yards, warehouses and structures.

Heavy-duty, precision-built, weather-proof signals for warning, alarm, paging, come-on and other signalling purposes.

Get in touch with Federal for reliable signalling equipment. Federal, the oldest and largest signal manufacturer, builds precision signals for longer life in heavy duty use.

Write for Industrial Signal Catalogue

FEDERAL ENTERPRISES, INC.
formerly FEDERAL ELECTRIC COMPANY, INC.
8711 South State Street Chicago 19, Illinois

▲ Mention Item NED-6183 when writing ▲

NEW
SILICONE-BASE
HEAT RESISTANT FINISH

MICO Aluminum hailed by leading manufacturers as the most heat-stable finish ever to be developed for every day commercial use.

NOW—a heat resistant finish that protects—*virtually doubles the life*—of vital parts in hundreds of products like mufflers, engines, boilers, ovens, oil and gas burners. MICO Aluminum has passed 23 different tests for thermal, chemical, and physical stability, and has thoroughly proved itself on the production line. *Investigate* MICO. *Get the facts!* Write today for your copy of the new MICO folder . . .

MICO . . . THE SILICONE BASE FINISH THAT WITHSTANDS 1000° (F.)—WITHOUT SURFACE BREAKDOWN.

Manufactured Exclusively by
MIDLAND INDUSTRIAL FINISHES COMPANY
Dept. NED-9 Waukegan, Illinois
ENAMELS • SYNTHETICS • LACQUERS • VARNISHES

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INSULATE WITH SYNTHANE

If you require a material for your product or process which must possess superior electrical properties, why not consider Synthane? It may be just what you are seeking.

Synthane laminated plastics have a *combination* of qualities such as low power factor, high dielectric strength, low dielectric constant and unusually good electrical insulating ability. These, with Synthane's mechanical and chemical characteristics, make it a material valuable for many applications in a wide variety of industries.

If your material requirements are strict and your present materials unsatisfactory, why not investigate Synthane? Just mail the coupon for your copy of the Synthane catalog or write for specific information without obligation.

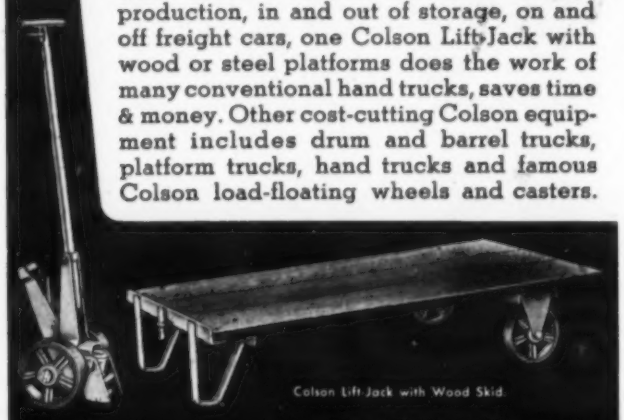
SYNTHANE
TECHNICAL PLASTICS
SHEETS • RODS
TUBES • FABRICATED PARTS • MOLDED-LAMINATED • MOLDED-MACERATED

SYNTHANE CORPORATION
Northeast River Road, Oaks, Pa.
Please send me a copy of the complete Synthane catalog.
Name _____
Name of Company _____
Title _____
Address _____
City _____ State _____

▲ Mention Item NED-6185 when writing ▲

Colson LIFT-JACK Systems Save Time, Money, Effort

Put new hustle in your materials-handling with Colson Lift-Jack Systems. Through production, in and out of storage, on and off freight cars, one Colson Lift-Jack with wood or steel platforms does the work of many conventional hand trucks, saves time & money. Other cost-cutting Colson equipment includes drum and barrel trucks, platform trucks, hand trucks and famous Colson load-floating wheels and casters.



Write Today For Free 56 Page Catalog

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • LIFT JACK SYSTEMS • INDUSTRIAL TRUCKS

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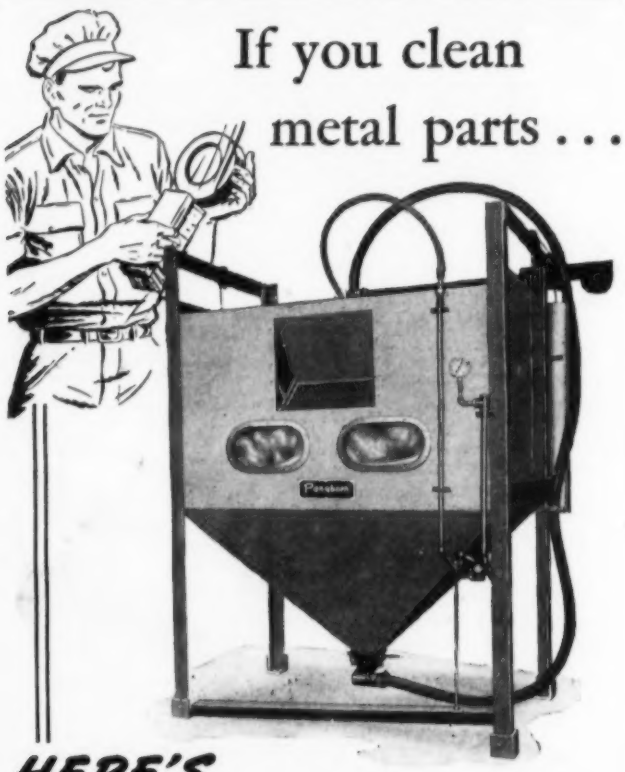


If you clean metal parts . . .

HERE'S A FASTER, BETTER, CHEAPER WAY!

Now you can clean metal parts *at a profit! Remove* scale, rust, paint, gum from metal in seconds. *Produce* a clean, smooth surface at low cost *far faster than by hand* with Pangborn Blast Machine!

QUICK, EASY, ECONOMICAL

No experienced operator needed. Unit is compact, saves valuable shop floor space . . . in most cases present air supply operates the Pangborn Blast Machine. Initial cost is surprisingly low and there are models to fit your specific job.

FULLY GUARANTEED

Made by Pangborn, manufacturers of more than 25,000 machines now serving industry and backed by 44 years of know-how, the performance of these Blast Machines *is guaranteed.* Send us your problem today . . . we'll send you full information by return mail. Mail the coupon now!

Pangborn

BLAST CLEANS CHEAPER with the right equipment for every job

MAIL COUPON TODAY!

PANGBORN CORP.,
294 Pangborn Blvd., Hagerstown, Md.

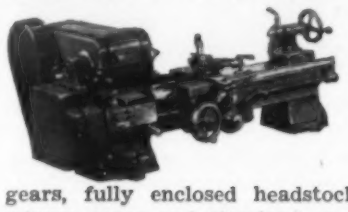
Please send me information on Pangborn Blast Machines.
I now clean_____

Name_____
Company_____
Address_____
City_____ Zone_____ State_____

▲ Mention Item NED-6193 when writing ▲

PRECISION LATHE
has large spindle capacity

This XL series lathe has 10-in. swing and 1⅜-in. hole through spindle. It is recommended for use where relatively large collet capacity is required but where floor space is restricted. Features include large precision roller bearings, four-speed V-belt underneath motor drive, full double-walled worm feed apron, full quick change gears, fully enclosed headstock with hinged cast aluminum cover and standard operator controls. Lathe can be obtained with 38 or 44-in. bed on three-drawer steel bench or with pedestal base in bed lengths up to 62 in. long. Made by **Sheldon Machine Co.,** 4215 N. Knox Ave., Chicago 41, Ill.



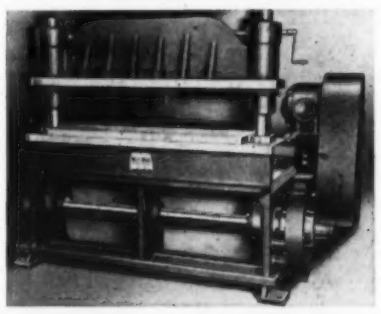
▲ Mention Item NED-6194 when writing ▲

APPLIANCE SWITCH
compact unit is chain operated

Because it is only 1 13/32-in. thick, model 71 Levolier switch is well suited for use in shallow lighting fixtures and canopies, small-motor controls and other limited-space equipment. Underwriters' Laboratories listed, switch has T-rating and handles 6 amp at 125 v. Installation is simplified by integral 6-in. wire leads. Lever, pull chain, 6-ft linen cord and bell are standard. Made by **McGill Mfg. Co.,** 1250 N. Lafayette St., Valparaiso, Ind.

▲ Mention Item NED-6195 when writing ▲

PUNCH PRESS
30-ton size has large bolster area



Combining bolster area of 16 x 48 in. and ram area of 10 x 48½ in., model 3048 Multi-Max punch press accomplishes blanking, piercing, notching, bending, shearing, drawing and other metal stamping operations. Large bolster and ram areas are possible because of compact design utilizing underneath double-crank drive mechanism. Press is of welded steel construction with four-point engaging clutch. Standard stroke is 2 in. and maximum stroke to order is 4 in. It has speed of 80 strokes per minute and ram adjustment of 2 in. Standard shut die height is 10 in. with larger sizes available. Crankshaft is 3 in. in diameter and is heat treated, ground and polished. Made by **Diamond Machine Tool Co.,** 3427 E. Olympic Blvd., Los Angeles 23, Calif.

▲ Mention Item NED-6196 when writing ▲

Cut production costs with

ACCURATE SPEED CHECKS

G-E Hand Tachometer

$98.50

Manufacturer's suggested retail price.

Increase production efficiency by using the G-E hand tachometer to check for motors that are running over- or underspeed. A flexible lead enables you to make measurements at hard-to-reach points. Range: rotational speeds from 200 to 10,000 rpm (or 20 to 100,000 rpm with optional accessories); linear speeds from 20 to 10,000 fpm, accuracy of plus-or-minus one per cent.

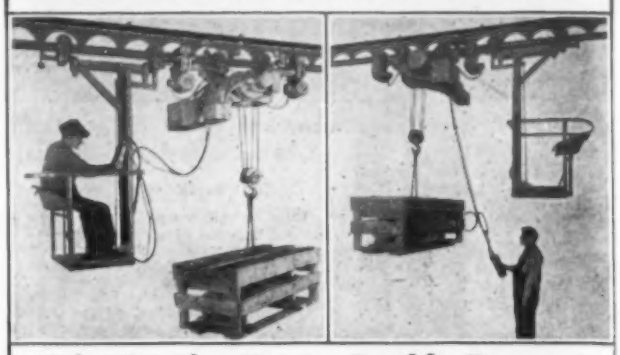
The G-E hand tachometer also offers you these features:
Simple, foolproof operation—overspeeding does not damage the instrument.
Low loading torque—1/20 oz-in.
Easy calibration on the job.

Stock shipment. Write for GEC-241. Apparatus Department, General Electric Company, Schenectady 5, N. Y.

GENERAL ELECTRIC
687-20

▲ Mention Item NED-6197 when writing ▲

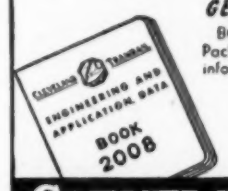
OPERATED FROM FLOOR OR PLATFORM



Hoist Carrier Serves Double Purpose

★ For distant runs the operator rides the platform. For local handling such as unloading trucks, he controls the unit from the floor. Also when the amount of materials to be handled requires two men, one can work on the floor and the other on the platform. ● This is only one of dozens of Cleveland Tramrail time-saving ideas.

GET THIS BOOK! BOOK No. 2008 Packed with valuable information . . .



CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6624 East 285th St. Wickliffe, Ohio

CLEVELAND TRAMRAIL

▲ Mention Item NED-6198 when writing ▲

SAVE MONEY WITH QD SHEAVES

MORE SIZES STOCKED

Your Worthington distributor lists more "stock sizes" (853) of sheaves and carries more sizes in stock than any other distributor.

By checking your sheave requirements, you can often order a stock size where otherwise you'd have to pay extra for a special.

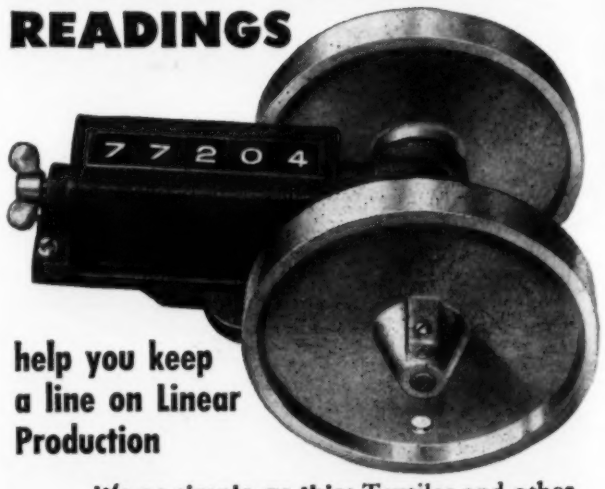
For ease of installation, absolute tightness on the shaft and *more stock sizes,* order Worthington QD sheaves, the original tapered cone-grip sheaves, easy to get on, easy to get off, yet always tight on the shaft. Worthington Pump and Machinery Corporation, Multi-V-Drive Sales Division, Buffalo, N. Y. General offices: Harrison, N. J. Dept. MVH94

WORTHINGTON

24MV.9.4

▲ Mention Item NED-6199 when writing ▲

DIRECT VEEDER-READINGS



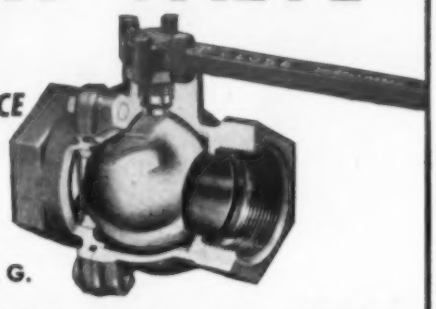
help you keep a line on Linear Production

It's as simple as this: Textiles and other materials pass under the smooth-surfaced twin wheels. And the worm-drive gears inside the counter cause the 5 figures to indicate directly in yards, feet, meters, or other units. The wheels are one foot in circumference . . . and other types of wheels, even grooved ones, can be had, for other purposes and materials. This Reset Worm-Driven Counter is one of scores of Standard Veeder-Root Counters. Write for Condensed Catalog to

VEEDER-ROOT INC., HARTFORD 2, CONN.

▲ Mention Item NED-6200 when writing ▲

NEW VALVE

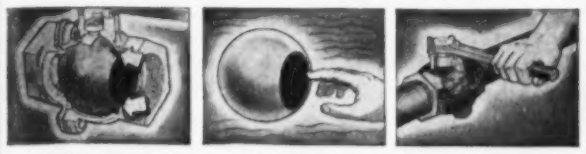


NO MAINTENANCE • LASTS LONGER

300 W. O. G.

ROCKWOOD ball type VALVE

In various types of industries, Rockwood Ball Type Valves have been giving longer, more dependable and efficient service with no maintenance. In many cases, the Valves had been opened and closed over and over again for more than a year under extreme rugged conditions and still operated efficiently.
For additional information and sizes, write for bulletin V-4.



LEAK PROOF SERVICE — FULL ROUND FLOW — QUICK OPENING AND CLOSING

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

Mention Item NED-6201 when writing

GENERAL BOX COMPANY ★★★★★ engineered shipping containers

GENERAL OFFICES: Illinois and Dearborn Sts. Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchendon, Natchez • Continental Box Company, Inc.: Houston, Dallas

Mention Item NED-6202 when writing

Here's help on your LOCK NUT questions

Every problem of vibration and loosening of parts calls for careful study to find just the right answer. "National" engineers have encountered just about every type of problem, and our line of Lock Nuts is designed to meet an unusually wide range of requirements.

The booklet illustrated here contains much useful data and should be helpful in determining type, size and cost of Lock Nuts for a given application. A copy will be sent on request.

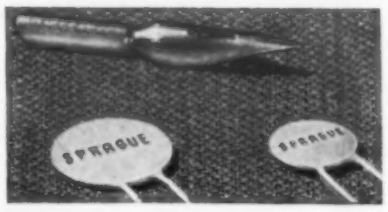
DRAKE—for heavy-duty, severe service.
DYNAMIC—where clearance is a factor.
HUGLOCK—for shock loading or vibration.
MARSDEN—for effective, low-cost locking.

National PRODUCTS

THE NATIONAL SCREW & MFG. CO., CLEVELAND 4, OHIO
National Screw & Mfg. Co. of Cal., 1649 18th St., Santa Monica, Cal.

Mention Item NED-6203 when writing

DISK CERAMIC CAPACITORS fit across miniature tube sockets



These wafer-thin capacitors save chassis space, reduce assembly time and improve performance of television and FM receivers. They consist of half-dime or dime-sized ceramic plate of high dielectric constant with silvered electrodes fired on both faces of disk. Unidirectional leads are soldered to silvering, and capacitors are coated with tough moisture-resistant insulating resin. They not only fit neatly across miniature tube sockets but can be used as high frequency bypass capacitors. Capacitors are available in ratings up to 0.01 or 2 x 0.004-mfd and 500-v direct current working. Made by **Sprague Electric Co.**, North Adams, Mass.

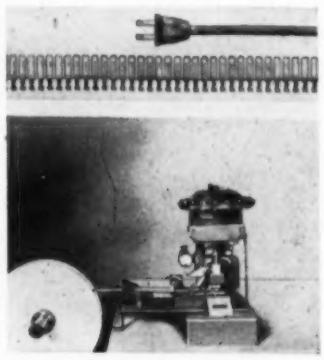
Mention Item NED-6204 when writing

AIR LINE DRAIN VALVE removes contaminants automatically

Each time air is used, this drain valve automatically removes all water and oil that may have collected in line, together with dirt, rust flakes, dust particles or other abrasive matter. Operation of valve causes minimum loss of air. It is suitable for wide variety of line pressures, and at 100-lb pressure will handle from 0 to 28 cfm. Installation is simple and no maintenance attention is required. Made by **Wilkerson Valve, Inc.**, 266 S. Dale Court, Denver, Colo.

Mention Item NED-6205 when writing

PLUG-BLADE SOLDERER attaches wires automatically



Utilizing blades in strip form from reels, this machine can attach and solder in tandem various sizes and styles of electric plug blades at rates up to 750 pairs per hour. Automatic dwell insures every blade being cinched to wire and held there for correct fraction of second to melt solder. Heat is applied to blades and wire by standard electric heating units and is controlled absolutely by ammeter, enabling machine to operate properly when supplied with from 105 to 125-v ac or dc. Air pressure from 80 psi up can be used to actuate machine, as automatic pressure reducing valve and air cleaner are standard equipment. Attaching dies for one type of blade can be removed and replaced with dies for another kind. Made by **Electric Terminal Corp.**, Dept. B, 31 Commercial St., Cranston, R. I.

Mention Item NED-6206 when writing

SINGLE AND DOUBLE DECK MODELS

SPEEDS UP HUNDREDS OF LIGHT SCREENING JOBS

Whether your problem is sizing, dedusting or reclaiming; whether the material is sand, candies, nuts, shot tumbler chips or what have you, this new lightweight screen is the modern, efficient way to do it. Sizes 1½′ x 4′ to 2′ x 8′. Write for folder, Dept. P.

SCREEN EQUIPMENT CO. INC. • BUFFALO 21, NEW YORK
Makers of Famous Seco Vibrating Screens
In Canada: United Steel Corp., Ltd., Toronto

Mention Item NED-6207 when writing

YOU TRY IT TEST IT PROVE IT FREE

New TORNADO* Floor Machine

FAST, THOROUGH, EASY-TO-USE—DOES ALL FLOOR MAINTENANCE WORK

A new, scientifically designed all-purpose floor machine which does better work, is correctly balanced for rapid performance, is easily controlled and handled, and is adjustable to operator. Quickly disassembled for storage and transport.

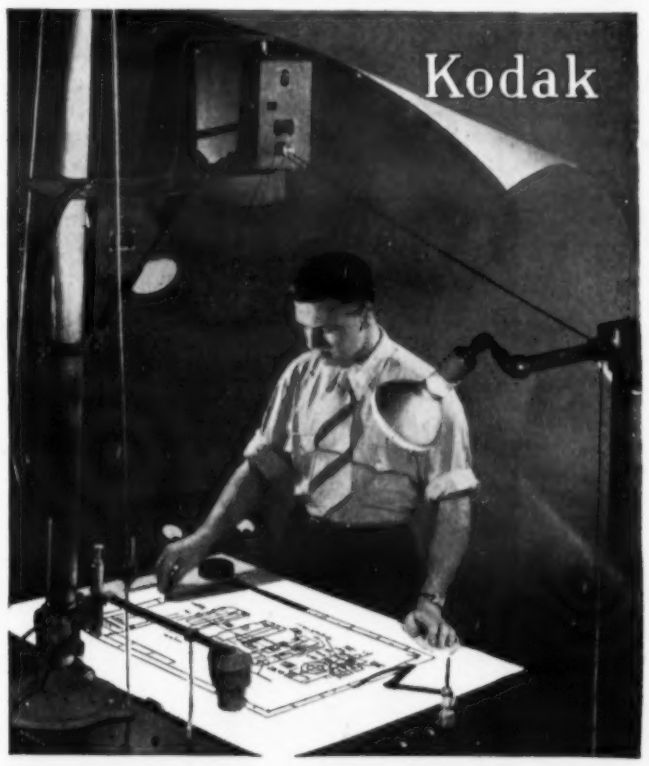
Write today for details of our free trial offer which enables you to try this better floor machine on your own work under your own conditions.

*Trade Mark Reg. U.S. Pat. Off.

FREE TRIAL OFFER

BREUER ELECTRIC MFG. CO.
5098 Ravenswood Avenue • Chicago 40, Illinois

Mention Item NED-6208 when writing



Valuable in Engineering . . . a Kodagraph Micro-File Machine

➡ ***It gives you increased protection*** . . . records your drawings with photographic accuracy and completeness on compact rolls of microfilm . . . which can be stored in vaults for maximum protection against fire, loss, and theft.

➡ ***It allows you to reclaim up to 98% of your filing space.*** You can microfilm old drawings, records . . . then destroy them, if you wish . . . and use the space made available for current files or other purposes.

➡ ***It speeds reference work*** in the office and in the field. Your microfilm records can be filed at your finger tips . . . ready for immediate review—greatly enlarged—in the Kodagraph Micro-File Reader. Or they can be shipped quickly, economically to branch offices, repair depots, etc. . . . where they can be flashed on any screen or light-colored wall with a Kodagraph Portable Projector. And should reference-size prints of any image be desired, they can be made readily with a Kodagraph Micro-File Enlarger.

Now available—a machine to meet your needs

Kodagraph Micro-File Machines are designed for engineering departments of every size . . . can be operated by anyone. Semi-automatic, they record drawings at surprisingly low cost: Imagine 675 drawings, 24 x 36 inches, on a 100-ft. roll of 35mm. Kodagraph Microfilm no larger than the palm of your hand!

Get all the facts! Write today for free illustrated Kodagraph Micro-File Equipment booklet.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

"Kodak" is a trade-mark

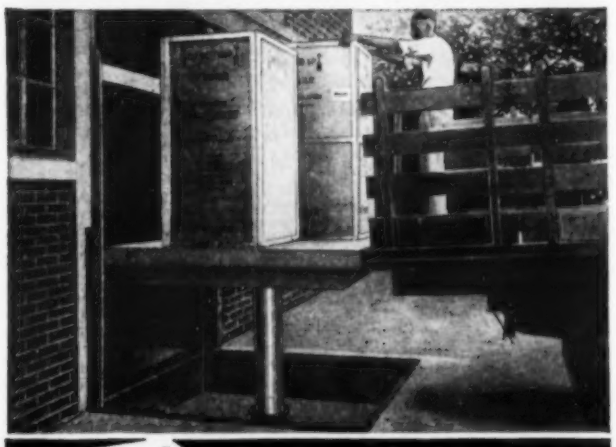
Mention Item NED-6209 when writing

NEW CATALOG SHOWS HOW TO

Lift Loads Faster!

You can slash labor costs by using Levelator Lifts for loading and unloading jobs . . . and for feeding and receiving materials from presses, shears, etc. Levelator car rises quickly and smoothly as oil is forced into powerful hydraulic jack by simple electric pumping mechanism or compressed air. Operation safe, dependable, economical. Installation simple. Write for Catalog RE-202.

ROTARY LIFT CO., 1021 Kansas, Memphis 2, Tenn.

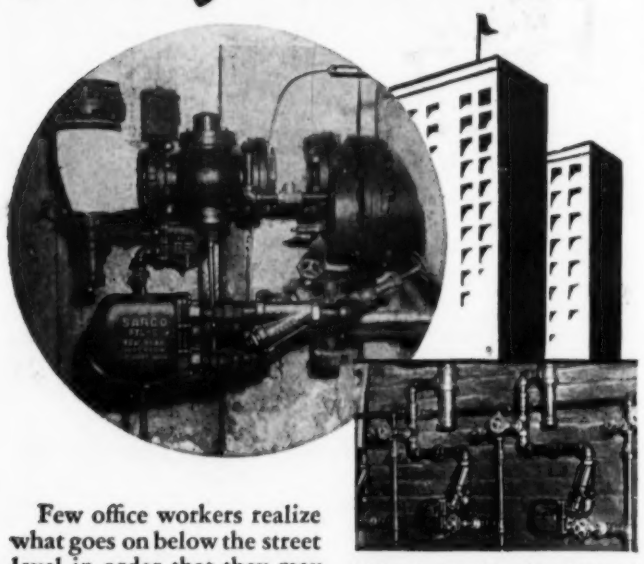


Rotary* LEVELATOR* LIFTS

*Reg. U. S. Pat. Ofc.

Mention Item NED-6210 when writing

HOW SARCO KEEPS A BIG OFFICE BUILDING *Comfortable!*

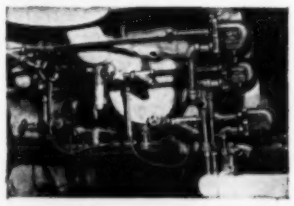


Few office workers realize what goes on below the street level in order that they may work in comfort and without interruption.

But the engineer of the Equitable Building, Chicago can tell you that Sarco is the heart of the heating and air conditioning systems in this big building. In fact, he says he "wouldn't have anything else."

Engineered primarily for service, such a system also results in minimum fuel consumption.

Hot water service, the source of many tenant complaints, is controlled to a degree with Sarco TR-21 regulators, float traps and strainers on primary and secondary tanks.



Bank of Sarco FTLO traps on risers and TR-21's on storage tank and heater.

YOU CAN HAVE THIS SERVICE TOO . . .

The Sarco Representative near you will look over your building without obligation. You will be surprised to see how much can be done and how little it will cost.

271

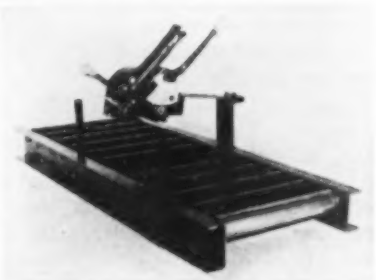
SARCO SAVES STEAM

SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

Mention Item NED-6211 when writing

STRAPPING UNIT
can be installed in main conveyor line or at right angle to it



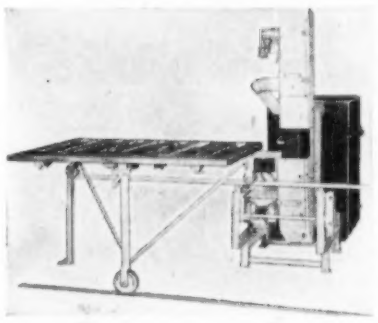
Consisting of roller section to which is fastened rigid mount and quick-change bracket for strapping tool, Acme conveyor strapping unit can be installed easily and can be countersunk in packaging table or bench if desired. Originally designed to speed up bundling of hardwood flooring, illustrated model E10A3 has two vertical stops on front edge. These are adjustable and serve to line up individual pieces in bundle. Stops also permit bundle with minimum width of 6 in. to be placed in most advantageous position for strapping operation.

Steel trough in middle of unit allows loop of strapping to be held so that bundle can be moved quickly through circle and strapped. Since trough permits loose end of band to be guided around package, intermediate ties can be made.

Rigid mount for No. 3 Steelstrapper can be adjusted for different package heights. Supporting arm can be moved up to allow package to pass under. Owing to design of bracket, it is possible to remove and replace strapping tool in 5 seconds. Made by **Acme Steel Co.**, 2822 Archer Ave., Chicago 8, Ill.

Mention Item NED-6212 when writing

ABRASIVE BELT SANDER
heavy-duty type machine permits dry grinding on mirror edging

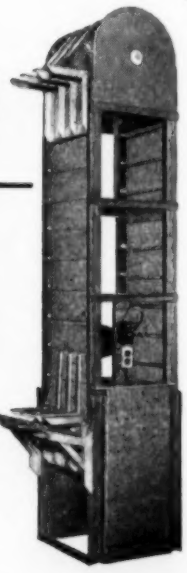


This machine employs 132 x 4-in. abrasive belts in dry grinding operation which has been found to eliminate washing, water spots and possible damage to silver on mirrors being edged. Sander motor is rated at 1 hp and collector motor at 1½ hp. Glass table is 32 x 60 in. with extensions opening to 56 in. wide. It can be equipped with four swivel type rubber rollers mounted below surface and attached to raising and lowering device so that they can be raised above surface of table. This permits one man to handle heavy and large pieces of glass with ease and without danger of scratching when turning or moving them. Glass truck incorporates three-wheel principle which allows it to run smoothly regardless of variations in floor. Dust collector filters air of all glass dust and particles, and its capacity exceeds that required by state regulations so that outside exhaust is seldom necessary. Made by **Henry G. Lange Machine Works, Inc.**, 158 N. May St., Chicago 7, Ill.

Mention Item NED-6213 when writing

A *NEW* WAY TO Raise Production

with *STEEL-PARTS* STEEL BELT Elevating CONVEYOR



Now . . . a NEW way to raise production and employee efficiency . . . to cut unit cost and operating space! STEEL-PARTS new ELEVATING steel belt conveyor is unbeatable for sending parts or packages from floor to floor in a continuous flow . . . lifts packages up or down . . . loads or unloads at desired height. Incorporates all of the famous features of STEEL-PARTS standard models. Let STEEL-PARTS engineers make specific recommendations concerning your materials handling problems.

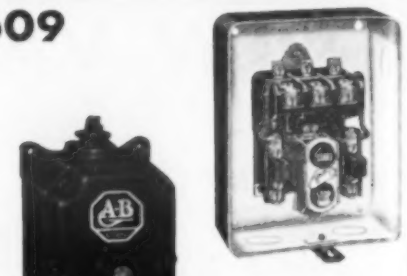
ENGINEERING DATA

BELT—heavy 18 gauge steel.
WIDTH—12 inches to 30 inches.
LENGTH—5 feet to 30 feet.
SPEED—Up to 50 feet a minute.
H.P. REQUIRED—½ to 2 horsepower.
LOAD LIMIT—(recommended) 50 lbs. per arm. This can be exceeded 50%.
PULLING LOAD LIMIT—1000 lbs.
ARMS—18 inch maximum length. Can carry a load up or down.

WRITE TODAY
STEEL-PARTS MANUFACTURING CO.
4624 W. Harrison St., Chicago, Ill.
DIVISION OF BLACKSTONE MANUFACTURING COMPANY

Mention Item NED-6214 when writing

Bulletin 609 Manual Starters



- Silver alloy contacts need no maintenance
- Generous wiring space in white interior

An Allen-Bradley Bulletin 609 across-the-line starter saves maintenance time on any machine. Contacts never need cleaning, filing, or dressing—they're always ready for action. Strongly built for years and years of trouble-free operation. Thermal breakers provide reliable motor overload protection. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY QUALITY MOTOR CONTROL

Mention Item NED-6215 when writing

VEMCO DRAFTING MACHINES

Designed by Engineers for Engineers

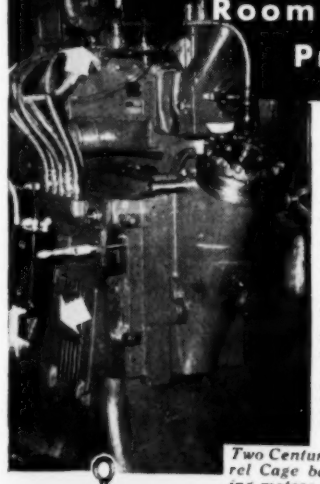
1. *Convenient thumb-action indexing for every 15°.*
2. *Simple and positive band tightening device.*
3. *Flexibly articulated arms for easy head movement and flat-lying scales.*

THE engineers responsible for the design of VEMCO Drafting Machines are thoroughly familiar with drafting problems. VEMCO Machines incorporate ALL the facilities desired by the engineer to fill his exacting needs. ★ The VEMCO offers smooth, effortless movement . . . positive setting and control for speed and accuracy . . . flexibility for convenient operation . . . elimination of an awkward assortment of drafting tools . . . sturdy construction for durability. ★ VEMCO Drafting Machines are finished in blue-green metallic color for eye comfort. ★ Ask your VEMCO dealer for a demonstration or write today for illustrated catalog covering drafting machines and drawing instruments.

V & E MANUFACTURING CO.
PASADENA 2, CALIFORNIA

Mention Item NED-6216 when writing

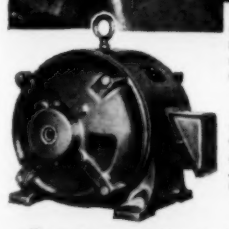
Century MOTORS Help Maintain Tool Room Precision on Production Jobs



Century motors are designed, produced and tested to give you all the precision your machine was designed to provide.

Their unusual freedom from vibration contributes to closer tolerances, smoother operation and fewer rejects. Precision built to close tolerances—ruggedly designed to maintain alignment—carefully balanced, electrically and mechanically.

Two Century Squirrel Cage ball-bearing motors drive an automatic milling cutter grinder.



Popular types and standard ratings are generally available from factory and branch office stocks.

Century motors are built in a wide range of types and kinds, in sizes from 1/6 to 400 h. p.

Specify Century motors for all your electric power requirements.

Century Electric Co. 1806 Pine St., St. Louis 3, Mo.
Offices and Stock Points in Principal Cities

Mention Item NED-6217 when writing

NEW CONDENSER CUTS REFRIGERATION COSTS SAVES COOLING WATER

*PATENTED

● The Niagara Aeropass Condenser cuts the cost of refrigeration by running compressors at lower head pressure, saving up to 35% of power and 95% of the cooling water.

The refrigerant gas passes thru two coils in an air stream. The first, "Duo-Pass"* dry coil, removes the superheat by air cooling and condenses oil vapor. The second, condensing coil, drenched by recirculated water spray, condenses by evaporation, transferring to the air 1,000 BTU for every pound of water evaporated. This done at low temperature, no scale forms on condenser tubes to clog air passage.

Between the two coils is the "Oilout,"* which purges the system of crankcase oil and dirt, keeps it always at full capacity.

The "Balanced Wet Bulb"* control holds head pressure at the practical minimum. It automatically proportions the fresh air stream to the condensing load with the full benefit of power-saving on cool days, providing full capacity for peak loads.

Niagara Aeropass design results from over fifteen years' experience condensing by air. It is completely trustworthy for year 'round operation. Users say, "It saves half the difficulties and labor of running a refrigeration plant."

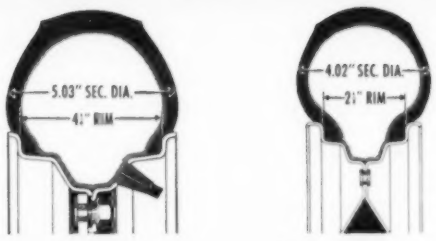
Units range from 10 to 100 tons capacity.
For full information ask for Bulletin 103.

NIAGARA BLOWER COMPANY
Over 35 Years Service in Industrial Air Engineering
Dept. ED, 405 Lexington Ave. New York 17, N. Y.
District Engineers in Principal Cities

▲ Mention Item **NED-6218** when writing ▲

Wide Base General Industrial Pneumatics

SAVE TIME • MONEY • LABOR



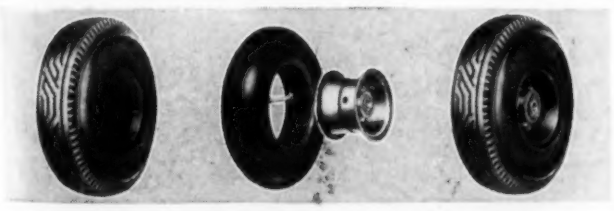
General Industrial Tire 16" Overall Diameter on Wide-Base Rim

Conventional Tire 16" Overall Diameter on Narrow-Base Rim

WIDE BASE MEANS

- **Greater load capacity at high and low speeds**
- **Better cushioning of loads and equipment**

General's exclusive wide-base rim makes the big difference. Heavier loads move faster, easier. Fragile cargoes and delicate equipment roll smoothly . . . breakage is minimized. That's why industries everywhere are adopting wide-base Generals as standard equipment. Investigate today. You'll find General Industrial Pneumatics do a better job on any mobile equipment where small tires and wheels are used.



AVAILABLE IN COMPLETE ASSEMBLIES OF TIRE, TUBE AND RIM OR TIRE ONLY
O. D. Sizes 8 inches to 22 inches

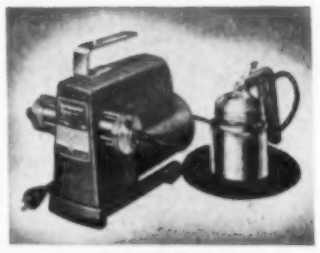
Write Today New catalog shows how to save time, labor, money with General Industrial Pneumatics. Dept. 4, The General Tire & Rubber Co., Akron, Ohio.

THE GENERAL TIRE & RUBBER CO.
Akron, Ohio

The GENERAL TIRE

▲ Mention Item **NED-6219** when writing ▲

PORTABLE PAINT SPRAYER
two-cylinder type designed for general industrial maintenance



This model No. SM-25 Spraymaster Zephyr can be used for spraying lacquer, enamel, paint, insecticides and moth-proofing solutions. When equipped with hose having tire valve chuck, it can be used for inflating tires. It is powered by 110-v universal motor and develops average spraying pressure of 25 psi through equalizer storage tank incorporated in unit and tested for 90 psi. Standard equipment includes 10-ft rubber hose, 16-oz aluminum container, adjustable spray nozzle and 6-ft rubber covered cord. Made by **Portable Electric Tools, Inc.,** Dept. R, 255 W. 79th St., Chicago 20, Ill.

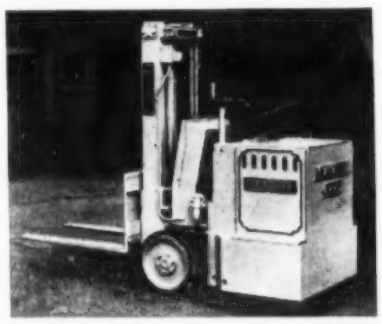
▲ Mention Item **NED-6220** when writing ▲

SMALL PARTS UTILITY CABINET
has adjustable and fixed dividers

Systematic storage of small parts is facilitated by Holdsall steel cabinet which has ten drawers, three with fixed compartments and seven with adjustable dividers. Partitions which divide drawers in width are flanged for strength and are slotted at 1-in. intervals for divider adjustment. Dividers are extruded for insertion of labels. Finished in olive green crinkle, cabinet measures 20-3/16 in. wide, 30-9/16 in. high and 15⅛ in. deep. Made by **General Fireproofing Co.,** Dept. NE, Youngstown 1, O.

▲ Mention Item **NED-6221** when writing ▲

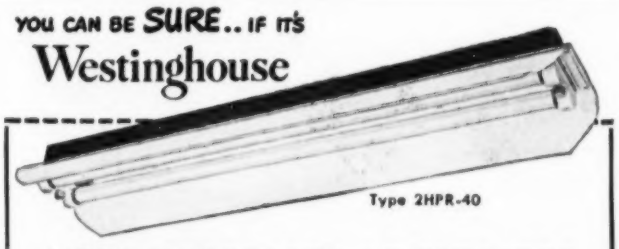
FORK TRUCK
for operation in congested areas



Compact design of model A - 1364 - 203 Jeep industrial fork truck provides extremely maneuverable chassis for getting into small elevators or other places where space is at premium. Unit retains full rated capacity of standard model but has reduced wheelbase of 33 in. Its length has been decreased so that overall length when carrying 48-in. pallet load is 103 in. Made by **Mercury Mfg. Co.,** 4038 S. Halsted St., Chicago 9, Ill.

▲ Mention Item **NED-6222** when writing ▲

YOU CAN BE **SURE**.. IF IT'S
Westinghouse



***NEW* ARMORLINE LUMINAIRES**
FEATURE PUSH-CONTACT LAMP HOLDER

FREE BOOK!

TELLS HOW LAMP HOLDER CUTS MAINTENANCE COSTS 6 WAYS

1. All-steel housing provides protection for the lamp holder.
2. Lamp guided into position by beveled ring guide. Once inserted, lamp can't fall out.
3. Spring pressure at both ends of the lamp minimizes effects of shock and vibration.
4. Starters accessible. Arrow indicates lamp operated by starter.
5. Sliding action of spring contacts provides self-cleaning contact with lamp pins.
6. Wiring contacts can be made without removing unit from fixture.

Send for free booklet B-4194, P. O. Box 868, Pittsburgh 30, Pa.

WESTINGHOUSE ELECTRIC CORP.
LIGHTING DIV. • EDGEWATER PARK • CLEVELAND, OHIO

▲ Mention Item **NED-6223** when writing ▲

Important Bulletin!...

on new Flexunit Plug-in Distribution Panelboards

YOU WANT this information. It changes the whole panelboard picture. The new, exclusive Federal Noark Flexunit Plug-In Distribution Panelboard is assembled to your specifications in a few minutes . . . direct from wholesaler's stock. Offers fastest installation. Write for your free copy. Federal Electric Products Co., 50 Paris St., Newark 5, N. J.

FEDERAL NOARK
FLEXUNIT PLUG-IN DISTRIBUTION PANELBOARDS
SALES OFFICES IN PRINCIPAL CITIES

▲ Mention Item **NED-6224** when writing ▲

▲ Mention Item **NED-6225** when writing ▲

NOW ALLEN
Hex-Socket Screws in STAINLESS STEEL
Available from Distributors' Stock

Non heat-treated, non-magnetic 18-8 stainless steel hex-socket set screws and socket head cap screws NC threads are now standard and quickly obtainable from your Allen Distributor.

HEX-SOCKET SET SCREWS: Thirty-three popular sizes, cup point, now standard.

SOCKET HEAD CAP SCREWS: Thirty-eight popular sizes, flat point, now standard.

WARNING
Allen-TYPE screws aren't necessarily Allen-MADE. Be sure to get genuine ALLENS in the black and silver box.

Other sizes, threads, points, and types of stainless steel are also obtainable on special order.

ALLEN ALLEN HEAD
MANUFACTURING CO.
Hartford 2, Connecticut, U.S.A.
NEW YORK, CLEVELAND, DETROIT, CHICAGO, LOS ANGELES

▲ Mention Item **NED-6226** when writing ▲

The Production Manager's Dream Fulfilled—

Continuous, up-to-the-second count of PRODUCTION right in the Production Control Office. Check idle machines or time study operations unobserved. Totalize and compare output from hundreds of machines in minutes.

Wizard Electric Counters panel mounted in compact self-supporting cabinet assemblies. Count anything that will operate electric switch or photo electric unit. Send for Bulletin PEC-40.

Catalog covering Modern Counting Devices for all applications — Send for your copy

Production Instrument Company
700-12 W. JACKSON BLVD., CHICAGO 6, ILL.
Representatives in Principal Cities

▲ Mention Item NED-6227 when writing ▲

An assembly practice that pays off in Better Aluminum Performance!

WRITE TODAY FOR FREE SAMPLES OF ALCOA ALUMINUM FASTENERS

Aluminum assemblies stay strong and tight when fastened with Alcoa Aluminum Fasteners. No galvanic action between dissimilar metals to loosen up joints. Alcoa Fasteners resist common corrosion, stay bright and attractive, won't red rust-streak adjacent surfaces. Phillips head screws and bolts available—speed assembly, cut rejects, decorate as they fasten.

Standard sizes and lengths, in sheet metal, wood and machine screws, in all popular head styles. Bolts, nuts and washers. Write on your letterhead for samples to ALUMINUM COMPANY OF AMERICA, 695J Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA
ALCOA *Aluminum* FASTENERS

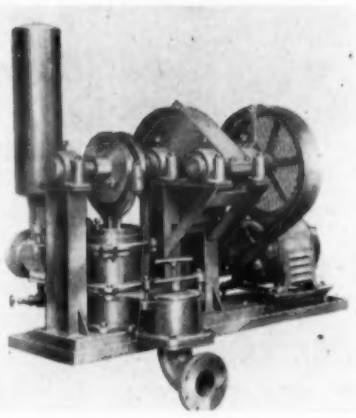
▲ Mention Item NED-6228 when writing ▲

INTERFERENCE LOCATOR
finds radio-television noise source

Electrical devices suspected of causing radio and television interference can be checked easily by model 248 noise locator. This sensitive portable instrument provides four-band coverage from 200 kilocycles to 18 megacycles plus spot checks at 50 and 150 megacycles. Interference intensity is indicated in headphones and on dual-scale meter having 0-100 and decibel graduations. Self-contained in sturdy steel case with hinged cover and web carrying strap, instrument weighs only 17 pounds complete with tubes and batteries. Made by **Tobe Deutschmann Corp.,** Instrument Div., 922 Providence Highway, Norwood, Mass.

▲ Mention Item NED-6229 when writing ▲

DIAPHRAGM & PLUNGER PUMPS
for transferring viscous and clotted compounds and thick residues

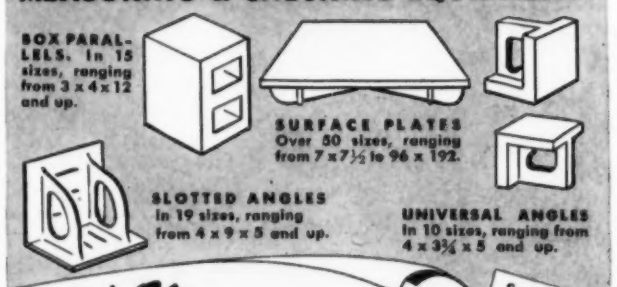


Recommended for use in packing houses, canning factories, tanneries and chemical plants, these motor and engine - driven walking beam plunger and eccentric drive plunger sludge pumps are designed for transferring liquids too heavy for self-priming centrifugal units. Applications for sludge pumps include removal of sludge from settling tank hoppers and transfer of materials from digestion tanks to storage units and sludge beds. These pumps will pass large quantities of bulky debris and will operate on suction lifts as high as 20 ft.

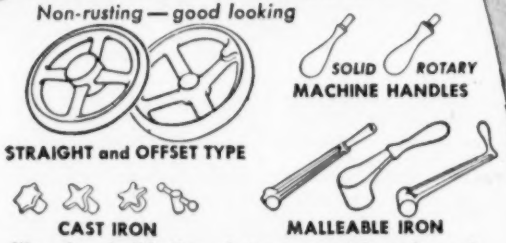
Engine-driven diaphragm pumps in capacities ranging from 3000 to 9000 gph. can be supplied either base-mounted or with steel wheels or pneumatic tires. Walking beam diaphragm and plunger pumps other than engine-driven, include 3 and 4-in. single diaphragm pumps complete with electric motors or arranged for belt drive. Eccentric drive plunger sludge pumps are powered by standard horizontal motor, V-belt transmission and reduction gearing or by gear head motor and roller chain drive. This type can be supplied also with vari-drive motor, and capacity ranges from 3000 to 14,400 gph. Made by **Marlow Pumps,** Ridgewood, N. J.

▲ Mention Item NED-6230 when writing ▲

Dependable
MEASURING & CHECKING EQUIPMENT



and Now
HAND WHEELS, KNOBS, HANDLES
Cadmium Plated READY TO DELIVER
Non-rusting — good looking



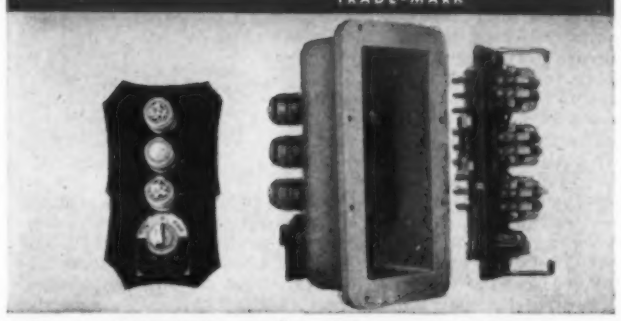
Send for Complete Catalog

We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
6771 E. McNichols Road • Detroit 12, Mich.

▲ Mention Item NED-6231 when writing ▲

R&S UNILARM
TRADE-MARK



The *Unitized* Alarm System

Unilarm, the factory built, standardized alarm system combines in one unit the many features essential for complete protection—unfailing in operation, easy to maintain.

Reduces installation costs to a fraction of previous systems.

Russell & Stoll's 46 years of specialized experience insures a product worthy of your confidence. Bulletin U 46-15 on request.

EXPLOSION-PROOF VAPORTIGHT GENERAL PURPOSE

68

Sold through Electrical Jobbers
Sales Representatives in Principal Cities

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

▲ Mention Item NED-6232 when writing ▲

Speed is Easy to Measure

...with the NEW

T21 Miniature Frahm Tachometer

that measures rpm or vpm merely by touch—by contact with the machine casing.

For portable service or for permanent mounting, this practical instrument measures speed through use of the resonant-reed principle. The T21 cannot be injured by over-speeding, requires no maintenance, and imposes no load on machines under test. Scales range between 1,000 and 13,000 rpm. Write for Bulletin 31-35-D.

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ Mention Item NED-6233 when writing ▲

The STAR BRAKEMOTOR is the best d------d* motor for tough jobs!

Full data on STAR Brakemotors (½ hp to 60 hp)...and how they perform on tough "start and stop" jobs...are found in STAR's new Brakemotor Bulletin. Write for your copy.

*DemandeD...by leading manufacturers of materials-handling equipment where motors must stand up under a daily beating from heat, cold, shock and strain... and be depended upon to "start and stop" loads with split-second timing—and minimum maintenance.

Star Electric Motor Co.
Standard and Special Motors
214 Bloomfield Avenue, Bloomfield, New Jersey

▲ Mention Item NED-6234 when writing ▲

GREAT BARGAIN
IN FLOOR MAINTENANCE

2c per square foot
of the total aisle and work space area,
IS THE AVERAGE COST TO RESTORE A SMOOTH EVEN TRAFFIC SURFACE TO WORN CONCRETE

Cover, repair and patch concrete, wood, or metal floors, inside or out . . .
For any weight of load the foundation will take . . .
Just solid pack holes or defects with Quick Floor . . . That's all . . . It's done . . . complete . . . and ready for use.
Ask for our long list of repeat users. There's the answer. Plenty good floors after 10 years heavy traffic.

2¢ PER SQ. FT.

- Fast and Easy to Place
- Instant Set
- No Delay
- No Cutting
- No Mixing
- No Wire
- PERMANENT

Quick Floor is guaranteed as represented or refund in full.

DURA-TRED COMPANY
The Original Floor Patcher and Surfacer Since 1938
360 N. Central Park Blvd. Chicago 24, Ill.
Mention Item NED-6237 when writing

*CONQUER those Handling Costs! . . . as the quickest, surest way to bring down unreasonably high production COSTS!

To find and realize *your* opportunities for *big* savings in this incomparably rich field,

*CONSULT the leading producer of modern handling methods and machines . . . CLARK

How a great many leading businesses are conquering costs—with quick and substantial profit to themselves—is described and illustrated in Material Handling News and in Clark's invaluable motion pictures. You can enjoy the benefits of both by requesting them on your business letterhead.

CLARK ELECTRIC AND GAS POWERED FORK TRUCKS AND INDUSTRIAL TOWING TRACTORS

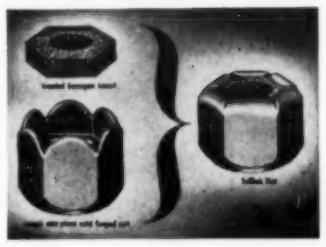
INDUSTRIAL TRUCK DIV., CLARK EQUIPMENT COMPANY BATTLE CREEK 21, MICH.
REPRESENTATIVES IN PRINCIPAL CITIES THROUGHOUT THE WORLD
AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS
Mention Item NED-6238 when writing

PIPE WRENCH
chain jaws afford positive grip

Pipe and solid rounds in diameters up to 2 in. are gripped securely with this Link-Grip wrench by hardened jaws of link chain which contact work around its periphery. Pressure is equalized on each jaw to minimize crushing or marring of pipe. As leverage is applied to handle, link jaws hold work without slipping. Link locks afford easy adjustment Tool is finished in chip-resistant baked chrome enamel. Made by **American Machine Works, Inc.,** 1328 Clark St., Racine, Wis.

Mention Item NED-6239 when writing

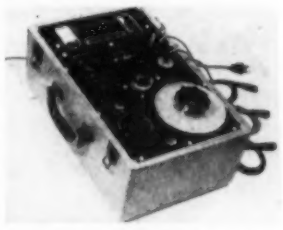
SELF-LOCKING HEX NUT
features hexagonal locking insert



Locking insert incorporated in Tufflok nut will not rotate within nut and assures tight grip at all times. For additional protection against loosening, it is chemically treated to resist both absorption of moisture and drying out. Having cold-forged body, nut gives performance in excess of A-N requirements for aircraft fasteners. It is available in sizes 4 through ⅜-in. Made by **Townsend Co.,** 201 River Rd., New Brighton, Pa.

Mention Item NED-6240 when writing

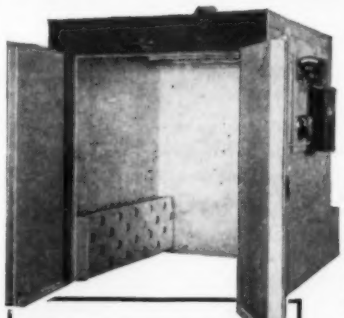
WHEATSTONE BRIDGE
measures wide resistance range



This electronic Resistohmeter is designed for measuring insulation and other resistance in range from 100 ohms to 100,000 megohms. Indicator used with bridge is 6E5 electron ray tube, which with adjusting circuit and balance switch replaces galvanometer. Unit is guarded internally so that leakage across bridge components due to high humidity does not affect operation or accuracy of bridge. External guard circuit protects specimens under test so that leakage across paths other than one under test is returned to point in bridge where it has no effect upon measurement. Accuracy and operation of unit are independent of power line voltage variations in both measurement of pure resistance and of leakage of condensers. Test voltages of 10, 100 and 500 v dc are used and unit operates on 115-v 60-cycle ac. Made by **Crown Industrial Products Co.** 1307 W. 69th St., Chicago 36, Ill.

Mention Item NED-6241 when writing

"Any Way You Figure"
Up to 50% Faster Baking



Despatch OVENS

- Fast finish baking of mass production parts, or for repair service . . .
- Vertical and horizontal forced air circulation prevents over or under baking . . .
- Gas or electric operated . . . wide range of sizes . . . factory tested . . . shipped assembled . . ready for operation.

There's a Despatch Finish Baking Oven to meet the needs of both large factories and small shops. Wide range of uses includes aging, preheating, drying and curing. Ideal for baking insulating varnish on armatures . . . film surfaces of lacquer and enamel . . . wrinkle finishes on metal parts . . . hundreds of other baking operations. 12 to 240 cu. ft. capacities.

Write for Bulletins on RS Ovens and Trucks

Manufacturers of ovens for paint finishing . . dehydrating . . curing . . all industrial and laboratory applications.

DESPATCH OVEN CO. Established in 1902
325 DESPATCH BUILDING
MINNEAPOLIS 14, MINNESOTA
Mention Item NED-6242 when writing

GORTON T-SLOT SETS

COMPACT, CONVENIENT
Rack furnished with each set to hold parts upright, in place.

SAFETY! at lowest cost —Protects Machine Tables

GORTON safe T-slot Nut Sets, with extra-long bearing surfaces, are designed to eliminate scoring of slots and distortion of table tops. They permit faster setups — and save you money by utilizing inexpensive studs for various heights required.

For any machine tables having ⅜", ½", ⅝" or 11/16" T-Slots. Purchase individually or in sets.

WRITE TODAY for FREE Accessories Catalog 1317.

GEORGE GORTON MACHINE CO.
1909 RACINE STREET RACINE, WISCONSIN, U. S. A.
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EXCELALL 179H
POST
TRACING PAPER

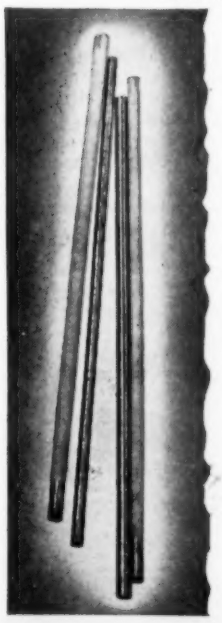
POST'S Excelall Tracing Paper is the finest product fitted to the exacting needs of draftsmen and engineers. Its white linen quality and satin finish are excellent for ink or pencil and for making prints. Comes in two weights.

TRY *this ultra-transparent POST Tracing Paper under your operating conditions. Write for your free sample today—care of P. O. Box 1091, Chicago 90, Illinois.*

THE FREDERICK POST COMPANY
3650 AVONDALE AVENUE, CHICAGO 18, ILLINOIS
Distributors in all Principal Cities

FOR EVERY PLAN YOU MAKE— THERE'S A PAPER BY POST
Mention Item NED-6244 when writing

A NEW HAYNES Hard-Facing Rod
Trade-Mark



to protect your metal parts from wear

A new hard-facing material—HAYNES 90 rod—has now been added to the HAYNES line. Specially developed for applications involving impact, abrasion, and heat, it also has excellent resistance to oxidation.

This rod finds its major field in the hard-facing of wearing parts on earth-moving machinery and on equipment for crushing and handling rock and ore. The life of such parts is increased several times by protecting them with HAYNES 90 rod.

The new alloy is available as bare or coated rods direct from Haynes Stellite Company, and also from distributors and jobbers of The Linde Air Products Company.

HAYNES STELLITE COMPANY
Unit of Union Carbide and Carbon Corporation
UCC
General Offices and Works, Kokomo, Ind.

The trade-mark "Haynes" distinguishes products of Haynes Stellite Company.
Mention Item NED-6245 when writing

Security
THE DEPENDABLE
LOCKNUT
WORTHY OF ITS NAME

Positive, dependable, automatic locking in any position on bolt. Does not require bolt tension. Stays put exactly where you wrench it, regardless of vibration violent enough to destroy the bolt itself.

Government test reports show 30 successive applications and removals with no appreciable wear on bolt or nut and no reduction in locking power.

Made in complete size range from 3/8" thru 2" N.C. or N.F. threads.

Standard equipment on all types of railroad equipment including diesel locomotives, automotive farm implements, road building machinery, conveying equipment, mining equipment and maintenance pumps and compressors, oil well and refining equipment, machine tools and presses.

SECURITY LOCKNUT CORPORATION
1815 N. Long Avenue, Chicago 39, Illinois

▲ Mention Item NED-6247 when writing ▲

Motorized Battery Operated Walkie Trucks are in BIG Demand

• MATERIALS HANDLING ENGINEERS Say THE WISE CHOICE is

MOTO-TRUC

• IT IS THE SHORTEST TRUCK—overall length is up to 15" shorter than other makes due to more compact power unit.
• IT IS THE EASIEST TO OPERATE. You get two speeds forward and two speeds reverse by a turn of the wrist on roller type handle. Push buttons in the ends of handle operate the hydraulic lift.
• POWER COST IS LOW. 12-volt interchangeable motor unit operates for as little as 8c per 8-hour day.
• DEPENDABLE SAFETY. Dead man controls and other safety features offer real protection to both operator and loads.

These and other Moto-Truc advantages are fully described in *Bulletin No. 49.* Write for it today.

These features add up to Lower Cost Material Handling

MOTO-PALLET TRUCK

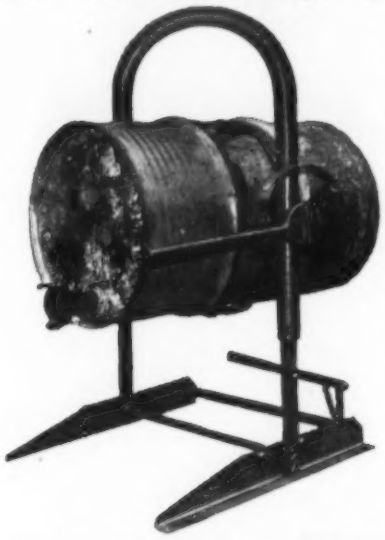
Patented Nydegger shackles on load wheels prevent bumping and jostling of pallet loads as truck is moved over uneven floors, across elevator entrances, etc.

The MOTO-TRUC Co.
1953 E. 59th Street
CLEVELAND 3, OHIO.
ORIGINATORS OF MOTORIZED HAND TRUCKS

▲ Mention Item NED-6248 when writing ▲

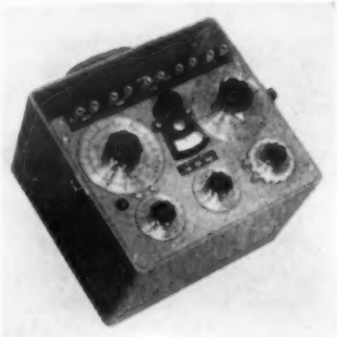
SAFETY STAND for dispensing contents of barrels

This Western Safety Barrel stand is recommended for holding 50 and 55-gal barrels or drums so that they can be tilted easily for dispensing contents. Stand consists of steel U-frame mounted on steel angles so that frame can be tilted forward over barrel for locking in position. Barrel is held in frame by means of flexible steel band with notched locking binder. When barrel has been put in stand, it can be locked in either horizontal, vertical or 45-degree position with tilting lever which is attached to trunnion pin on outside of one leg of frame. Lever can be used also to revolve barrel when desired. Made by **Henry H. Paris Distributor, Inc.,** 1135 Rothwell St., Houston, Texas.



▲ Mention Item NED-6249 when writing ▲

UNIVERSAL IMPEDANCE BRIDGE uses directly calibrated slidewire for interpolation within decade steps



Of conveniently small size and light in weight for easy portability, model 250-A universal impedance bridge provides high accuracy by utilizing precision wire wound resistors in bridge arms. Slidewire consists of 0.1 per cent precision decade with coaxially mounted single turn rheostat for interpolation within decade steps. Bridge can measure resistance from 1 milliohm to 1 megohm; capacitance from 1 mmfd to 100 mfd; and inductance from 1 microhenry to 100 henrys. It has storage factor of 0.02 to 1000 and dissipation factor of 0.002 to 1.

Instrument is housed in 9½ x 10¼ x 10½-in. cast aluminum cabinet which is supplied with cast aluminum cover to protect terminals and controls when it is not in use. Included in cabinet are four replaceable flashlight cells which power bridge, precision reference standards, 1000-cycle per second tone generator, zero center 1 microampere per millimeter suspension galvanometer for dc null detection and headphones for ac null detection. Space is provided for storing headphones, test leads and for companion model 850-A amplifier which increases null detection sensitivity on ac measurements. Made by **Brown Electro-Measurement Corp.** Dept. NED-1, 4635 S. E. Hawthorne Blvd., Portland 15, Oreg.

▲ Mention Item NED-6250 when writing ▲

More OEM's Specify US Gauge Than Any Other Make

... Because USG Assures More Value

* ORIGINAL EQUIPMENT MANUFACTURERS

OEM'S know that US Instruments give more service, more accuracy, more value for the money. They know USG can supply all their needs for gauges measuring as low as 1" of mercury absolute, to gauges measuring up to 100,000 lbs. pressure per square inch. When ordering gauges, do as 6 out of 10 OEM'S do ... Specify US Gauge. Write for literature. United States Gauge, Division of American Machine and Metals, Inc., Sellersville 12, Penna.

Pressure, Temperature, Flow and Electrical Measuring Instruments

USG UNITED STATES GAUGE

▲ Mention Item NED-6251 when writing ▲

Foundation For Safety
AW SUPER-DIAMOND FLOOR PLATE

AW SUPER-DIAMOND FLOOR PLATE
A BETTER FOOTING FOR PRODUCT AND PLANT

Pattern Shown ½ actual size

Write for informative 16 Page Catalog. It gives maximum sizes and other information.

AW SUPER-DIAMOND
FLOOR PLATES THAT GRIP L-35*

A Product of ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

▲ Mention Item NED-6252 when writing ▲

"There's no substitute for the ZIP!"

The Zip-Lift is the standout in quality — the original wire rope hoist with full magnetic push-button control. Tens of thousands of P&H Zip-Lifts are now in service. Why not benefit by this proved experience? Add one to your handling now — to boost production and cut costs! They're available for immediate delivery. For full details, send for Bulletin H20-4.

P&H ZIP-LIFT

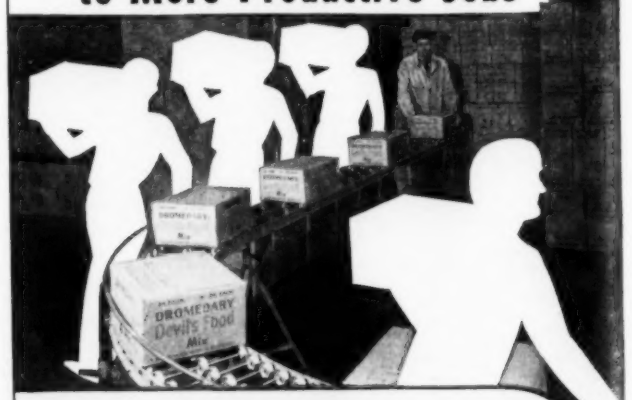
HANDLE IT Thru-the-Air AT LOWER COST

P&H ELECTRIC HOISTS
4537 West National Avenue
Milwaukee 14, Wis.

HARNISCHFEGER CORPORATION
HOISTS • WELDING ELECTRODES • MOTORS • EXCAVATORS • ELECTRIC CRANES • ARC WELDERS

▲ Mention Item NED-6253 when writing ▲

Out of the Handling Picture to More Productive Jobs



Metzgar Wheel and Roller Gravity Conveyors and Portable Power Belt Conveyors are highly adaptable, trouble-free time and money savers.

Portable units or installed systems speed and modernize your handling operations at a saving.

Describe your requirements and let us suggest the most practical and economical equipment for your needs. Descriptive literature on request.

MANUFACTURERS AGENTS: SOME TERRITORIES ARE AVAILABLE

METZGAR CONVEYORS
METZGAR CO.
416 Douglas, N. W.
GRAND RAPIDS 4, MICH.

▲ Mention Item NED-6254 when writing ▲

QUICKLY REPAYS ITS COST

—in speeding production, cutting time, releasing manpower, saving demurrage, etc. One man with the Link-Belt Electric Car Spotter does the work of a dozen in spotting cars, warping barges, moving transfer cars, dragging material, and other heavy work. Stationary or portable models; with integral or separate motors. Write for folder showing how others are using it.

LINK-BELT COMPANY

Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Dallas 1, Houston 3, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices in Principal Cities.

11,461

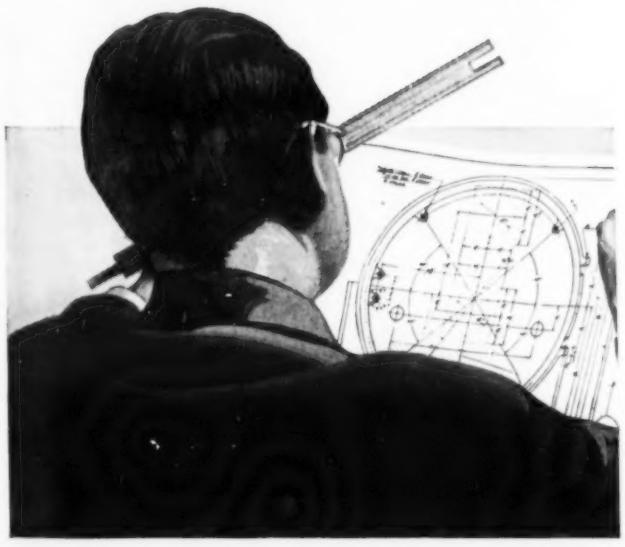
SEND NOW for Book No. 1992-A

▲ Mention Item NED-6255 when writing ▲

DRIPRINT

TRADE MARK

The *Better* Dry-Developed Paper



Few fields have shown such steady progress as the chemistry of print-making. Not that recent years have revealed any revolutionary processes. They have not. But all papers and methods have been improved to a marked degree. If you are a user of direct positive prints produced by ammonia vapor development, or are interested in adopting this process, be sure to try Dietzgen's DriPrint, the *better* dry-developed paper, and see the difference. May be used with any make of high-speed printing and developing equipment. Superior contrast, firm full-bodied lines with clear white backgrounds . . . reliable uniformity . . . time-saving speed . . . these desirable features have made Dietzgen's DriPrint the specified choice of thousands of discriminating print users. A better paper at no extra cost. Available in cut sheets or rolls. Ask your Dietzgen dealer or nearest Dietzgen office for a demonstration.

EUGENE DIETZGEN CO.

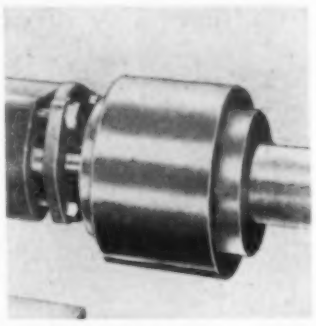
Chicago • New York • San Francisco • New Orleans
Los Angeles • Pittsburgh • Washington
Philadelphia • Milwaukee
Dealers in All Principal Cities

DIETZGEN

DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

▲ Mention Item NED-6256 when writing ▲

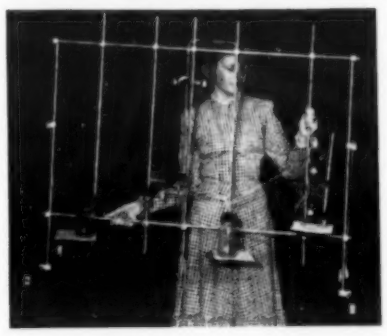
FLEXIBLE COUPLING
gear-type unit assures alignment



Utilizing but seven parts, this gear coupling is of forged high carbon steel with internal teeth running full working length. Sleeve can be quickly removed as it is held without bolts. Hub teeth are cut radially, permitting accurate alignment without excessive backlash. Neoprene seals are reinforced with garter springs which maintain constant closure against slight depressions and unevenness of shaft surfaces. Coupling is supplied in sizes of ¾, 1, 1½, 2, and 2½ in. Made by **Sier-Bath Gear & Pump Co.**, 9269 Hudson Blvd., North Bergen, N. J.

▲ Mention Item NED-6257 when writing ▲

SUPPORT FRAME
erected easily with screwdriver



System of interchangeable rods and anchors enables technician to erect rigid supports for practically any laboratory assembly for attachment to bench, wall or floor. Frame consists of three parts: hard aluminum rods ½-in. in diameter, anchors for attachment of braces and for right-angle connection of rods, and foot anchors for attachment of assembly where desired. Entire assembly can be moved without danger of misalignment. Made by **Chemical Rubber Co.**, 2312 Superior Ave., Cleveland 14, O.

▲ Mention Item NED-6258 when writing ▲

ELECTRO-DYNAMIC SHAKER
generates oscillatory linear motions

With maximum force rating of plus or minus 25 lb at any frequency and ⅜-hp output at 60 cycles per second, model 6 shaker can be matched to wide range of mechanical loads by available power supply units. Shaker is used for vibration resonance testing, fatigue strength determinations and other applications where large vibratory forces over wide frequency range are required. Furnished with carrying handles and trunnion support, unit can be moved readily to exert forces in any required direction. Made by **Calidyne Co.**, Dept. NED-2, 751 Main St., Winchester, Mass.

▲ Mention Item NED-6259 when writing ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

AVOID LADDER SLIPPING ACCIDENTS

•

UNIVERSAL LADDER SHOES

Meets the requirements for use on all types of floors and surfaces. Provides real ladder security. Approved by the Underwriter's Laboratories. Adopted by many companies for general service.

Write for Bulletin No. L-99

IPCO *Safety Equipment for all Industries*

INDUSTRIAL PRODUCTS COMPANY

2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ Mention Item NED-6260 when writing ▲

"M-B" AUTOMATIC *Air Line* FILTERS *and* LUBRICATORS

This equipment is designed to give pneumatic tools and devices the protection that results in decidedly lower operating costs.

FILTER element removes solids .00039 and larger. TRANSPARENT BOWL provides visibility. LUBRICATOR delivers desired volume of oil, no more, no less. Adjustable Venturi Valve permits efficient operation on broad range of volume and pressure . . . Bowl can be refilled without shutting off air supply. THESE DEVICES CAN BE USED AS SEPARATE UNITS OR IN COMBINATION.

Write for Literature

Representatives in Principal Cities

M-B PRODUCTS

130-134 E. Larned St.
DETROIT 26, MICHIGAN

▲ Mention Item NED-6261 when writing ▲

The trained hand of Hassall offers you:

Hassall
ESTABLISHED 1850

HASSALL cold-heading may solve your immediate special part problem...Special nails, rivets and threaded parts made in diameters from 1/32" to 3/8"—lengths up to 7"...Rivets 3/32" diameter and smaller a specialty...also small threaded blanks...Variety of metals, finishes and secondary operations...Economy, quality and quick delivery in large or small quantities...Your inquiries answered promptly...ASK FOR FREE CATALOG...3-color DECIMAL EQUIVALENTS WALL CHART free on request.

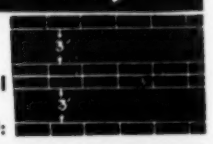
JOHN HASSALL, INC. 398 OAKLAND ST. BROOKLYN 22, N.Y.

Manufacturers of Cold-Headed Specialties—Established 1850

▲ Mention Item NED-6262 when writing ▲

Figure It Yourself!

Rotabins reduce storage space

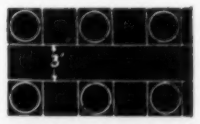


Conventional Shelving Floor Layout:

⅔ sq. ft. for storage and 1 sq. ft. for aisles

Rotabins also save time . . .

. less time walking
. less time looking
. . . less breakage
. . . . less loss



Rotabin Floor Layout:

2 sq. ft. for storage and 1 sq. ft. for aisles

Let F-G-M engineers help you plan most profitable layout. Send for Catalog 106-A.
Frick-Gallagher Mfg. Co.
408 Shubert Bldg.
Phila. 2, Pa.

FGM **FRICK-GALLAGHER**

WELLSTON, OHIO

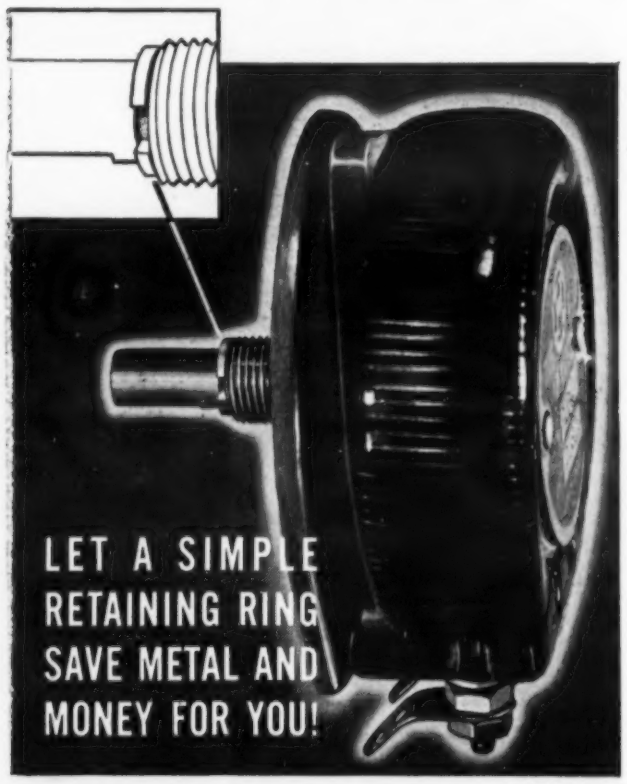
SHELVING • PARTS BINS • ROTABINS
COUNTERS • RACKS • TABLES

▲ Mention Item NED-6263 when writing ▲

The handy Alnor Pyrocon is unequaled for quick, accurate reading of surface temperatures of molds, steam traps, bearings, plastics, revolving rolls, and other materials. It's a well-balanced, handy instrument that will stand heavy use, yet perform with laboratory precision. A wide selection of thermocouples and extension arms permits adaptation to many types of service. For complete details and prices, send for Bulletin No. 4257. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

Mention Item NED-6264 when writing



On this finely made rheostat retaining rings saved material and assembly time. They save money both for Hardwick Hindle, the manufacturer, and for its customers.

Looking at this application you may say it was obviously a "natural," but there are literally thousands of cases where retaining rings can save as much or more.

Examine your machines and products to see where the use of these inexpensive modern artificial shoulders can cut your costs.

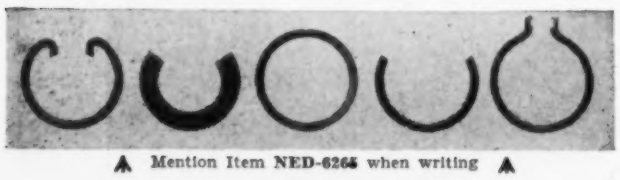
It's needlessly expensive to hold a mechanism in place with unnecessarily big shoulders or collars, or to temporize with small cotter pins etc., etc.

Let us show you how these high grade steel rings can do a thoroughly efficient job, saving money for you and for your customers.

More and more applications of retaining rings are being made every day.

Write today for descriptive folder.

THE NATIONAL LOCK WASHER CO.
NEWARK 5, NEW JERSEY • MILWAUKEE 2, WISCONSIN



Mention Item NED-6265 when writing

WHITEPRINTER & DEVELOPER
improved medium production type utilizes dry direct process

Improved by addition of new light source, constant wattage transformer, different type ammonia pump, improved cooling system and removable feed table, model 60-G whiteprinting and developing machine replaces model 55-G. Light source is 60 w per inch high-pressure mercury tube which permits printing speeds up to 18 ft per minute. Printer and developer are synchronized to same mechanical speed which eliminates delay between operations. Constant wattage transformer provides efficient tube performance even though power line variations range from 200 to 250 v. Pump provides simple means of filling ammonia reservoir from supply bottle located within cabinet. Cooling system maintains constant low temperature across entire width of contact glass for efficient printing on various types of sensitized materials. Made by **C. F. Pease Co.**, 2622 W. Irving Park Rd., Chicago, Ill.

Mention Item NED-6266 when writing

RUBBER & COMPOSITION MALLETS
withstand severe service conditions while protecting fine surfaces

Semihard rubber construction of mallet shown in illustration will not injure fine wood or other semisoft surfaces, yet it is hard enough to prevent bounce or rebound. Shaped to provide good hitting surface, mallet is equipped with sturdy hardwood handle firmly anchored to head.

Made of hard rubber and fabric compound, composition mallet will not chip, crack, burr or dry out. Fabric impregnated with rubber is wound layer upon layer, then molded and vulcanized to form solid head that is completely encased in rubber. During use, all force is applied to ends of laminated layers, thus eliminating tendency to shatter or chip away. Head provides broad flat hitting surface and is firmly attached to white ash handle. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

Mention Item NED-6267 when writing

ELIMINATE
"THE HOT SPOT"
IN COMPOUND MELTING

IT's all right to heat "that certain spot" when young mischief makers need it.

But the principle doesn't apply to compound melters.

Uniform, all-over, low-wattage heat is required to melt compounds fast, uniformly and at lowest overall cost.

Spotty heat burns the material, causing carbonization where the heat is hottest, leaving cold lumps where there is no heat. This results in wasted materials, production delays and increased cost, three handicaps to profitable operation.

That's why Sta-Warm offers you compound melting tanks having sidewalls and bottom completely surrounded with many feet of specially designed, closely spaced heating coils. There are no "hot spots" in Sta-Warm tanks regardless of the size or shape you specify.

That's why it's safest and most profitable to specify "Sta-Warm".

Inquire today for the type and capacity of compound melter your job requires. Sta-Warm has it.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST. • RAVENNA, OHIO

Mention Item NED-6268 when writing

KOEHRING 205 CRUISER CRANE
Rubber Mounted to Handle Jobs Around Your Plant Faster, at Lower Cost

Check these advantages:

- Economical 1-man operation
- Travels at 5.9 m.p.h.
- Independent travel, swing, hoist
- Hydraulic steering
- High Lifting Capacity
- Heavy-Duty construction—plenty of stability

775

KOEHRING COMPANY
Milwaukee 10, Wisconsin

Mention Item NED-6269 when writing

Precision ROD CUTTING at High Speed

with the New DI-ACRO ROD PARTER

The DI-ACRO Rod Parter further increases the applications of "DIE-LESS DUPLICATING" as a cost-cutting, time-saving production technique so well established by DI-ACRO Precision Benders, Brakes and Shears.

Do you require precision?—DI-ACRO Rod Parter holds tolerance to .001" on duplicated cuts. The ends are square, and roundness is maintained.

Do you want speed?—The Rod Parter exceeds output of other methods with equal accuracy, on rods and bars up to ⅝". Torrington Roller bearings incorporated in an exclusive multiple leverage arrangement provide remarkable ease of operation.

"PARTS OFF" MANY MATERIALS
All hot and cold rolled rods
Stainless steel
Chrome Molybdenum
Copper Brass
Aluminum Bi-metals
Many types of plastics
Fibre Rubber Wood

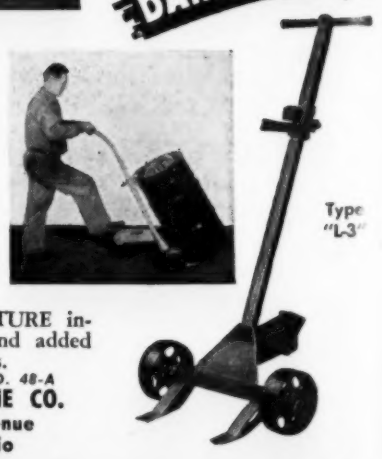
GET "DIE-LESS DUPLICATING" CATALOG!
Shows parts produced without die expense by DI-ACRO Benders, Brakes, Shears, Rod Parters, Notchers, Punches.
Pronounced "DIE-ACK-RO"

DI-ACRO O'NEIL-IRWIN MFG. CO.
354 8th Avenue, LAKE CITY, MINN.

Mention Item NED-6270 when writing

Cut Cost! END THE NEED FOR HELPERS.

Use SABIN ONE MAN BARREL TRUCK



Handling barrels and drums weighing up to 800 pounds is an easy job for one man if he uses the Sabin Type "L-3" Barrel Truck.

Operation is simple. You run truck up to the container, hook on at top, then pull back on handle to pick up load.

THIRD WHEEL FEATURE insures better balance and added safety in moving loads.

WRITE FOR BULLETIN NO. 48-A
THE SABIN MACHINE CO.
6536 Carnegie Avenue
Cleveland 3, Ohio

ALSO TOTE PAN, BOX, CARBOY, KEG TRUCKS!

Mention Item NED-6271 when writing

Extra Protection
AGAINST HIGH MOTOR COSTS

3 Great Protective Features!

- Heavy cast iron frame protects top, bottom, sides, ends. Resists corrosion, distortion, physical abuse.
- Ball bearings pre-lubricated at factory. Need no attention for years. Protected against inadequate maintenance.
- Multiple-dipped and multiple-baked stator plus inter-phase insulation protect against electrical breakdown.

GET FULL DETAILS on the extra-protective features of *Safety-Circle* motors. Ask your A-C Authorized Dealer or Sales Office or write for Bulletin 51B6210. Sizes 1 to 20 hp. A-2707

ALLIS-CHALMERS *"Safety-Circle"* DRIP-PROOF MOTORS

Safety-Circle is an Allis-Chalmers trademark

Allis-Chalmers, 918A So. 70 St., Milwaukee, Wis.

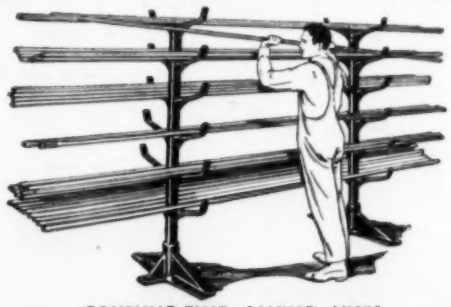
ALLIS-CHALMERS

▲ Mention Item NED-6274 when writing ▲

▲ Mention Item NED-6275 when writing ▲

—WANT QUICK SERVICE IN YOUR STOCK ROOM?

The BROWN SECTIONAL RACK saves the time previously lost in end-hauling each bar of stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time. Any time you require additional storage space, all you need do is add more units. If you want to relocate it at any time, you can do so quickly for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn up, warp, sag, or twist; depreciation is practically nil. SEND FOR BULLETIN NO. 26-D DESCRIBING THE BROWN SECTIONAL RACK.



COUPLING-TIME SAVING VISES

BROWN ENGINEERING CO.

129 N. THIRD ST. READING, PENNA.

RACKS • VISES • CLUTCHES • COUPLINGS

▲ Mention Item NED-6276 when writing ▲

MASONRY SAW
has automatic blade pressure control

Of rigid tubular and ¼-in. angle construction, Valor masonry saw is mounted on wobbleproof cart and weighs only 225 pounds. Water pump and blade are driven by 1½-hp motor for dry and wet cutting. Saw is available in dry-cut model also. Head is easily removable, and built-in foot pedal arrangement allows ample head-throw for ordinary sawing. If operator desires additional head clearance, there are ten different positions available. Dual foot pedal springs and self-priming pump are utilized, and all parts are cadmium plated. For extreme portability, take-apart model is supplied which fits most automobile trunks. Made by **Victor Engineering Co.**, Bristol, Pa.

▲ Mention Item NED-6277 when writing ▲

VACUUM BREAKER
protects against back siphonage

Valve mechanism of this vacuum breaker for plumbing applications consists of shallow cup with flexible disk mounted above and below it and placed in position above inlet. Any flow of water lifts valve assembly into tight seal at top of housing. If vacuum develops, valve assembly is drawn down firmly to close inlet and prevent back-siphoning.

Breaker is solid brass and chromium plated; also available in rough finish for concealed locations. Operating mechanism is readily accessible for inspection or servicing by removing top cap. Two sizes of ⅜ and ½-in. can be obtained with inlet and outlet having female threads. Made by **Chicago Faucet Co.**, Chicago 39, Ill.

▲ Mention Item NED-6278 when writing ▲

CASE HISTORY FILM
depicts use of pneumatic equipment

Available for showing without cost to executives in their own plant, 16-mm black and white sound motion picture entitled "Production Miracles Through Controlled-Air-Power" shows how cost reductions were achieved in various manufacturing processes. Scenes are actual production shots, showing in detail how Controlled-Air-Power devices can be applied to standard and custom built machine tools to increase production and reduce fatigue in milling, drilling, tapping and grinding operations. Arrangements for showing this 28-minute film can be made by writing Mr. W. C. Richards, Jr., **Bellows Co.**, 862 E. Tallmadge Ave., Akron 10, O.

▲ Mention Item NED-6279 when writing ▲

FLEXCO HD BELT FASTENERS AND RIP PLATES

FOR HEAVY CONVEYOR AND ELEVATOR BELTS OF ANY WIDTH

Flexco HD Fasteners make a tight, butt joint of great strength and durability . . . distribute the strain uniformly. Operate smoothly over flat, crowned or take-up pulleys. Made of steel, Monel, Everdur and Promal.

Flexco Rip Plates are for repairing and patching damaged belts.

Ask for Bulletin F-100

FLEXIBLE STEEL LACING COMPANY

4664 Lexington St., Chicago 44, Illinois

Strong, Smooth and Readily Troughing.

Order From Your Supply House

▲ Mention Item NED-6280 when writing ▲

$HORT CUT$ BY CHIEF BLACKHAWK

Triple Your Hydraulic Ram Speeds with a Motorized Pump

REPLACE HAND PUMPS WITH THIS LOW COST PORTABLE UNIT

You make startling savings with this P-182 electrically-driven hydraulic pump. Use it on production or maintenance jobs with Blackhawk "Porto-Power", pipe benders and other hydraulic equipment.

Pays Its Cost Fast

The P-182 lessens fatigue and, on many jobs, slashes approximately 66-2/3% off time now consumed by hand pumps. It serves one or more rams — delivers up to 10,000 p.s.i.

Change Over Now

Ask your Industrial Supply Distributor or write today for details on the cost-cutting P-182 pump.

Porto-Power ® —A Product of **BLACKHAWK MFG. CO.** Dept. P1499 Milwaukee 1, Wis.

COMPLETE PACKAGE—½ H.P. Motor, Pump, Valves, Reservoir in ONE unit!

P-182 Pump serves with pipe benders, presses, machine tools, etc.

BLACKHAWK

HYDRAULIC EQUIPMENT • WRENCHES

▲ Mention Item NED-6281 when writing ▲

Introducing the New

"Luminum-Line" Plate and Pipe Marker

This new "Safety" steel stamp holder of cast aluminum is "easy on the operator" . . . gives long-life, rugged and dependable service . . . for all heavy-duty plate and pipe marking.

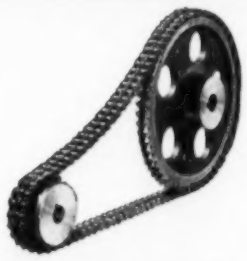
Write today for data and proposal!

M. E. CUNNINGHAM CO.

SAFETY STEEL STAMPS

151 East Carson Street • Pittsburgh 19, Pa.

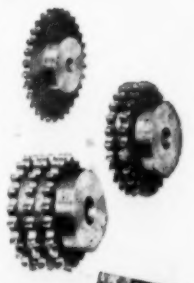
▲ Mention Item NED-6282 when writing ▲



CULLMAN SPROCKETS

OVER 80,000 SPROCKETS AND 80,000 FEET OF CHAIN NOW IN STOCK

There are important advantages in bringing your sprocket requirements to Cullman Wheel. Chief among these is the fact that in fifty-five years of specialization in the design and manufacture of sprockets and kindred power transmission parts, has built up the amazing total of over eighty thousand sprockets in stock. Invariably your requirements can be met quickly from this great sprocket and chain inventory. This always brings the cost down. Quick delivery is also available at Cullman on special made to order sprockets. Send your blue prints for recommendations and estimates.

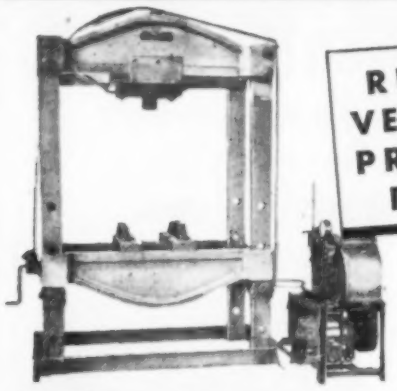


Be sure to write for the New Cullman Sprocket Catalog Today

CULLMAN WHEEL COMPANY

111-S 1333 Altgeld St., Chicago 14, Ill.

▲ Mention Item NED-6283 when writing ▲



RUGGED VERSATILE PRESSING POWER

300 TON Rodgers Shop Press with 2-way travel cylinder and 4-way valve

Rodgers HEAVY DUTY SHOP PRESSES

WRITE FOR CATALOG No. 313

FOR THE BIG, TOUGH JOBS where you want fast, dependable pressing power you'll find the answer in a standard Rodgers heavy duty shop press. Available in 150, 200, 300 or 400 ton capacities, these sturdy units are designed and built to take the rugged jobs with ease. They are powered with 2-speed or 4-speed hand pumps or power driven pumps.

Standard shop presses are also made in 60, 80 and 100 ton capacity for lighter work. Special presses made to order.

Rodgers Hydraulic, Inc.

HYDRAULIC POWER EQUIPMENT

7425 WALKER ST., ST. LOUIS PARK, MINNEAPOLIS 16, MINN.

Mention Item NED-6284 when writing

IRONBOUND SKIDS

...Still the low cost time proven method for efficient and economical handling of materials.

Here's how one manufacturer is reducing handling costs on production line loading of semi-live skids with special Ironbound tiering trays.

Skids or semi-live skids can be made for use with box tops or trays to provide tiering, space-saving mobility. You, too, can stack, tier or handle special materials with various types of superstructures.

We can show you how a skid system will work in your plant to save you money. Write for illustrated literature describing many Ironbound standard material-handling units.

RolTruk

THE IRONBOUND UNIT FOR SIMPLIFIED HANDLING OF PAPER ROLLS, DRUMS, BARRELS, REELS, KEGS, ETC.

● The Ironbound RolTruk will "pick-up and go" with cylindrical items weighing up to 2000 pounds. Available in models to meet most every roll handling requirement. Ask for special fully illustrated 6 page bulletin 10-RT.

Typical removable Ironbound Box Top on standard Semi-live Skid.

IRONBOUND BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

Ironbound

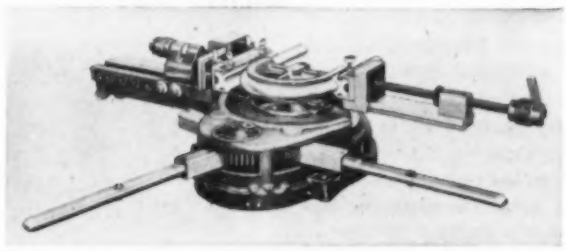
SKIDS • SEMI-LIVE SKIDS
DOLLIES • FLOOR TRUCKS

Mention Item NED-6285 when writing

TUBE BENDER

manually operated production tool handles tubing up to 3-in. diameter

Thin or heavy walled copper and aluminum alloy tubing and light or medium gage annealed steel tube can be handled by model 848 production tube bender. It is



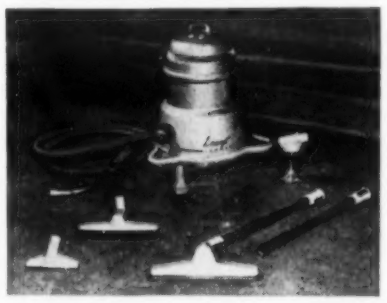
operated by hand levers which actuate central spindle and attached radius block through gearing at ratio of 30:1 or 8:1. Bends up to 180 degrees can be made, including offset and U-bends in middle of long tubes. Tube clamping and radius forming assemblies can be mounted on either side, and successive right and left hand bends can be made. Radius of bend ranges from 1¼ to 12 in.

Radius blocks, clamp blocks, slide blocks and mandrels are available for all standard sizes of tubing. Accessory equipment which can be used with other Parker benders as well as this model includes pneumatic mandrel extractors to speed extraction of mandrels in smaller radius work, side angle indicators for gaging of angles in different planes, and special work tables and tool cabinets. Made by **Parker Appliance Co.,** 17325 Euclid Ave., Cleveland 12, O.

Mention Item NED-6286 when writing

VACUUM CLEANER

canister type unit operates on cyclonic suction principle



Recommended for use in hospitals, hotels, theaters, institutions and industrial buildings, No. 99 commercial vacuum cleaner is equipped with swivel-turning ball bearing casters and 10-ft rubberized hose. It employs four-way filter system which prevents dust from seeping back into room, cyclonic action which forces dirt into bottom of dust bowl, disposable paper filter and permanent cloth filter. Other features include Magic Energizer which maintains peak cleaning efficiency, wide cleaning area 31½ ft from plug to cleaning tool and video-pak which prevents television and radio interference.

Attachments include carpet nozzle for rugs and carpeting, floor and wall brush for bare floors, dusting brush for dust collecting surfaces, crevice tool for cleaning radiators and corners and adjustable spray gun for paints, enamels and waxes. Made by **Lewyt Corp.,** 60 Broadway, Brooklyn 11, N. Y.

Mention Item NED-6287 when writing

AMERICAN PHILLIPS SCREWS
... bring Profits into Sharper Focus

... both in Production and Sales of Photo Equipment

4-WINGED DRIVER CAN'T SLIP OUT OF PHILLIPS TAPERED RECESS

SHARP FOCUS ON COST-CONTROL: Lights, cameras, and other equipment are liberally studded with American Phillips Screws. Makers can't afford rejects or refinishing ... can't afford slow assembly with slotted screws. They find *that American Phillips Screws always cost least to use.* For time-savings alone run as high as 50%!

SHARP FOCUS ON SALES: American Phillips Screws have built up a huge public who know that the universal crossed recess means *quality throughout.*

AMERICAN SCREW COMPANY, Providence 1, R. I.
Chicago: 589 E. Illinois St., Detroit: 502 Stephenson Bldg.
Norristown, Pennsylvania

AMERICAN PHILLIPS Screws

Mention Item NED-6288 when writing

HERE'S A QUICK-LIFT TIME-SAVER FOR YOU!

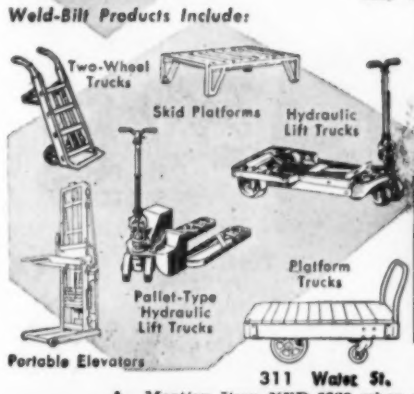
NEW SINGLE STROKE MECHANICAL LIFT TRUCK

"Weld-Bilt" PRODUCTS

Push this new Weld-Bilt Truck under a load, give the handle one quick stroke — and you're ready to roll! With the full 360° swivel you can easily maneuver the load. And you can lift the load from ANY ANGLE within 270°. Many other features make this new WELD-BILT Mechanical Lift Truck important to your materials handling operations . . . features like the Handle Safety Spring that keeps handle in safe vertical position when not in use; Automatic "anti-kickback" Handle Release; smooth, full-hydraulic lowering; Front Wheel Equalizer to keep load level and eliminate handle shock and whip . . . and many others.

This new addition to the popular "Weld-Bilt" line can save time and money in your operations. Let us tell you about it—without obligation! It's available in narrow and wide widths, standard lengths, for capacities up to 2500 lbs.

Weld-Bilt Products Include:



WEST BEND EQUIPMENT CORPORATION
MATERIALS HANDLING ENGINEERS

311 Water St. WEST BEND, WIS.

Mention Item NED-6289 when writing

Cabot's Brush Cleaner

BEFORE AFTER

WILL SAVE YOU MONEY

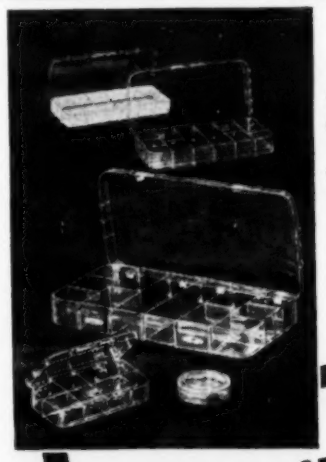
Makes Old Brushes LIKE NEW

Why spend money on new paint brushes when Cabot's Brush Cleaner will reclaim your old ones.

TRY A FREE SAMPLE of Cabot's Brush Cleaner on your oldest, most paint-caked brush. Watch it smack out hardened paint right down to the heel. Rinse in hard or soft water and now look at the soft, lustrous bristles—like new. Comes ready-to-use—non-caustic—non-inflammable—harmless to bristles or setting. *Write Today!*

Samuel Cabot, Inc.
926 Oliver Bldg., Boston 9, Mass.

Mention Item NED-6290 when writing



Pyra-Shell TRANSPARENT UTILITY BOXES

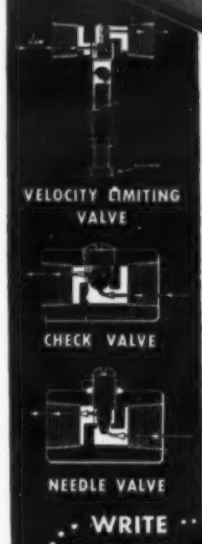
STORAGE • SERVICE KITS
ASSEMBLY • SALES PACKAGING

Unusually sturdy yet featherweight, these handy boxes are available in a complete range of sizes and compartment arrangements. Unlike rigid, brittle molded boxes, they are fabricated from tough, flexible sheet stock. If one of the many standard boxes does not meet your exact needs, low die cost permits fabrication of special boxes in small quantities at reasonable cost. *Write for Catalog.*

SHOE FORM CO. INC.
24 DeWitt St. Auburn, N. Y.
IN CANADA: United Last Co. Ltd., P.O. Box 3000, Montreal

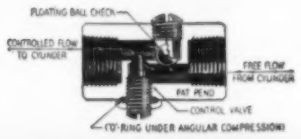
Mention Item NED-6291 when writing

FLOW CONTROL VALVE for Cylinder Speed ADJUSTMENTS over a WIDE RANGE IN AIR OR HYDRAULIC USE



The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check, as illustrated at left. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 4 sizes—1/8", 1/4", 3/8" and 1/2".

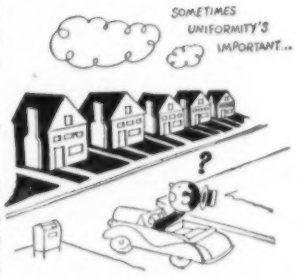
Attractive prices—immediate delivery. Write for illustrated circular and price list.



WRITE ... **Pneu-Trol Devices, Inc.**
3122 N. California Ave. Chicago 18, Ill.

Mention Item NED-6292 when writing

How to keep costs down with OZALID



Your Ozalid operation *should* be the simplest, most inexpensive business system in your organization.

If it isn't, check these two factors:

1. Always use Ozalid sensitized materials in your Ozalid machine. Month after month, package after package, Ozalid materials are *uniform*. Printing speed, fade-resistance, physical strength, density, and eleven other characteristics are kept in scrupulous balance so that one batch of paper gives you the same results as the last one . . . or the next one!

Thus your Ozalid operator's time is spent in printing—not in studying the characteristics of vastly differing diazo materials.

2. Ozalid's nationwide service organization is as near as your telephone book. Let these trained technicians and business wizards keep your Ozalid operation in tiptop form. They'll keep your Ozalid machine in super-efficient working condition, as well as help you set up new methods of getting more work done with less effort . . . through Ozalid!

If you have an Ozalid machine, are using Ozalid materials and taking advantage of the national Ozalid service organization *. . . you're saving time and money!*

If you do not have an Ozalid machine, it's time you found out how error-proof Ozalid duplicates anything typed, drawn, written, or printed (on translucent paper) in seconds! Write, today. Or look up your Ozalid distributor in the classified book and call him!

***Don't copy . . . use* OZALID!**

OZALID

Ozalid, Johnson City, N. Y.
Dept. 111
A Division of General Aniline & Film Corporation

"From Research to Reality"

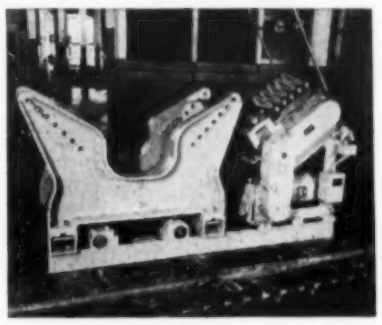
Mention Item NED-6293 when writing

FIXTURE CLAMP
clamps casting onto pilot plate

With this device, clamping is effected by means of alloy T-bolt engaging hardened insert which is furnished with unit. This insert is ground for press fit in bottom of pilot plate. Bolt can be cut off to suit any height of job, and hand knob used as handle can be adjusted. As indicated in illustration, spherical collar nut and steel ball handle used for tightening are optional equipment. Lock nuts and spring can be adjusted for height and prevent clamp strap from dropping to bottom of T-bolt. Made by **Morton Machine Works,** 2421 Wolcott St., Ferndale 20, Mich.

Mention Item NED-6294 when writing

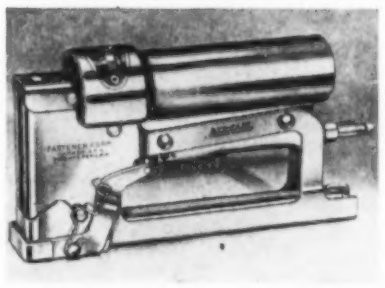
COIL CRADLE & STRAIGHTENER
power machine handles strip stock



Accommodating strip material up to 12-in. wide and 1/8-in. thick and coils with maximum OD of 40 in., model PDSC - 1240 combination power driven stock straightener and coil cradle takes up little more floor space than is required for latter alone. Cradle holds coils and straightening unit has pair of power driven, hardened and ground feed-in rolls and ten straightening rolls, lower five of which are also driven. Maximum thickness which can be satisfactorily straightened is dependent upon type and temper of material. Unit also includes mercury switch control arrangement and 1½-hp drive motor. Made by **U. S. Tool Co.,** Dept. PDSC, Ampere (East Orange), N. J.

Mention Item NED-6295 when writing

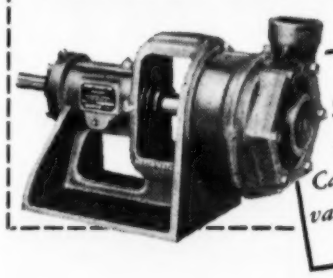
TRIPPING DEVICE
for actuation of pneumatic tacker



Operation of Duo-Fast air tacker (*See NED Oct. '48*) from positions wherein it is difficult to pull motivating trigger is facilitated by Auto-Trip attachment. With this unit, workman can operate tacker from any position by simply touching trip lever to material to be tacked. This trip lever then automatically motivates trigger. Unit can be fitted on any Duo-Fast tacker. Made by **Fastener Corp.,** 876 Fletcher St., Chicago 14, Ill.

Mention Item NED-6296 when writing

NEW... BUT WITH A CENTURY-OLD REPUTATION!



CN Centrifugal. Single- and two-stage; 48 sizes on 4 frames. Capacities to 1600 gpm, varying with heads up to 500 ft.

Meet the CN, a brand new Worthington pump. Liquid end is frame-mounted. You can use the handiest drive available—direct-coupled or belt driven—and can quickly replace one with another.

The CN is just one of Worthington's complete line of standard pumps in all types and sizes . . . every one backed by 108 years' experience . . . longest in the field! For further facts proving *there's more worth in Worthington,* write to *Worthington Pump and Machinery Corporation, Merchandising Division, Dept. H820, Harrison, N. J.*

WORTHINGTON

B8-20

Mention Item NED-6297 when writing

6 INSIDE REASONS for Choosing . . . the RELIANCE GEARMOTOR

1. Helical, wear-hardened gears cut from alloy steel forgings provide wear-resisting surfaces.
2. Gears shaved before hardening for correct eccentricity and helical angle and bright, smooth surfaces—factors contributing to quiet operation and longer life.
3. Gear arrangement in simple train minimizes number of moving parts—promotes quietness.
4. Pinion and gear supported and spaced to reduce deflection—permits high load-carrying capacity.
5. Splash system with large oil reservoir assures constant and thorough lubrication of all parts.
6. Anti-friction bearing construction throughout.

Built by RELIANCE ELECTRIC & ENGINEERING COMPANY and PHILADELPHIA GEAR WORKS, INCORPORATED

RELIANCE ELECTRIC & ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Representatives in Principal Cities

Mention Item NED-6298 when writing

SLY "Economy" DUST FILTERS

- Simple
- Compact
- Low Priced

Up to 1,400 Cubic Feet of Air per Minute

These complete, compact dust filters offer many economies in limited capacity ranges for the purpose of collecting dust from grinding, screening, mixing, packaging, and finishing operations. Often several of these units are employed in preference to a single large collector, for greater flexibility of operation, to save piping, and to keep different materials separate. They have the advantage of greater cloth area per cubic foot of air, hence greater filtering capacity. (Never install a dust filter with less than one square foot of cloth for each four cubic feet of air per minute.)

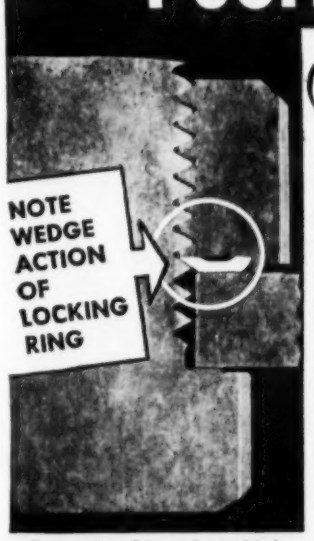
These "Unit" Filters can be shipped assembled to facilitate installation. For larger air volumes, there are Sly Dust Collectors with unlimited capacity ranges. May we send you complete information?

THE W. W. SLY MFG. CO.
4748 Train Avenue • Cleveland 2, Ohio

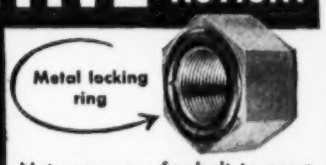
Representatives in New York • Chicago • Philadelphia • Detroit • Cincinnati Rochester • St. Louis • Toronto • Los Angeles • Birmingham • Minneapolis

Mention Item NED-6299 when writing

HERE'S POSITIVE LOCKING ACTION!



Cross-section of An-cor-lox and bolt showing locking ring after flattening.



Not necessary for bolt to come through nut. Locking ring on bottom of nut.

Thread fit NOT important.

Vibration and shock will not walk nut off—will only force locking ring farther into bolt threads.

Bolt stretch, wear, moisture do not affect gripping power.

Up to softening point of the metal, high temperatures do not lessen locking grip.

Crushed locking ring prevents passage of gas and liquids.

Nut can be re-used many times.

Available in high, thin, cap or spanner designs.

SEND for TEST SAMPLES and CATALOG

An-cor-lox TRADE MARK REGISTERED *Lock Nuts*

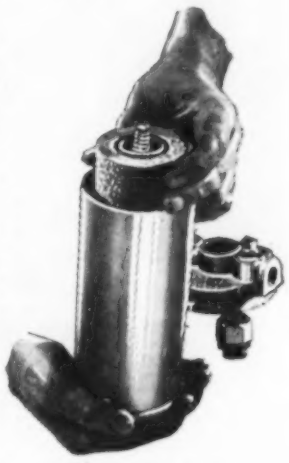
LAMINATED SHIM CO., Inc. *An-cor-lox Division,* 2309 Union St., Glenbrook, Conn.

AN-COR-LOX NUTS • SHIMS • SHIM STOCK • STAMPINGS

Mention Item NED-6300 when writing

GUARANTEED Fluid Cleaning

...DOUBLE Cartridge Life



Cuno is the only manufacturer of replaceable-cartridge filters *guaranteeing* to remove all solids larger than specified, plus a large proportion down to 1 micron. MICRO-KLEAN's exclusive "graded-density-in-depth" permits smaller particles to penetrate to varying depths, eliminates surface loading, *doubles dirt holding capacity*. Resinous impregnation and polymerization prevents channeling, rupturing, shrinking and distortion.

Varying densities, capacities from a few to more than 800 gpm, connections from ⅜ in. IPS to 6 in. flanged, single or multiple cartridges to handle full flow. MICRO-KLEAN cartridges fit other makes; special lengths available for built-in installations.

FREE BULLETIN

Address Cuno Engineering Corp., 709 South Vine St., Meriden, Conn.

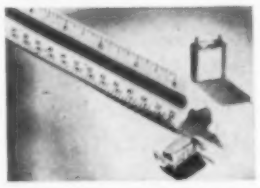
CUNO

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

Mention Item NED-6301 when writing

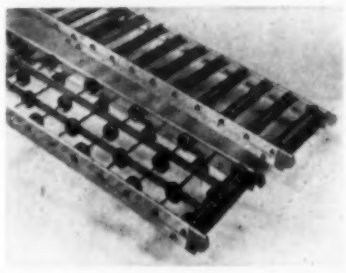
THERMOSTAT for low-wattage electrical circuits



Featuring electrically independent bimetal strip thermal element that eliminates artificial cycling, type C positive operating thermostat responds only to temperature changes in controlled device or surrounding air. Produced with wide variety of terminal arrangements and in many operating ranges up to maximum of 600° F, unit will operate normally at temperatures as low as −60° C. It can be used alone or in conjunction with disk type thermostats for precise control of low-wattage electrical circuits in communications and electronic equipment, apparatus and appliances. Standard and hermetically sealed styles are available. Latter type can be supplied also as double unit set to open at both minimum and maximum temperature. Made by **Stevens Mfg. Co.**, Dept. B, Mansfield, O.

Mention Item NED-6303 when writing

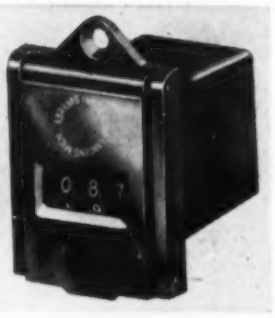
ALUMINUM CONVEYOR weighs only 29 lb per 8-ft section



All structural members of this conveyor are heat-treated aluminum alloy extrusions, and rollers are 1½-in. diameter tough impact-resisting drawn aluminum tubing. Rollers are mounted on heavy-duty ball bearings and are set on either 3½ or 7 in. centers. Conveyor can be obtained in 12 and 18-in. widths and couples to Arr-O-Lite aluminum wheel conveyor. Sections are available in standard lengths of 3, 5 and 8 ft and in 45 and 90-degree 4-ft radius two-lane curves. Bolted construction permits interchange of parts with wheel conveyor. Made by **Arrow Products, Inc.**, Dept. AP-749, 417 Front Ave., N. W., Grand Rapids 4, Mich.

Mention Item NED-6304 when writing

MAGNETIC COUNTER records up to 1200 counts per minute



This three or four-digit precision counter has utility wherever space limitations are present. Measuring 1 in. high and 2 in. deep, unit weighs but 2 oz. Each additive or subtractive counter wheel can be reset manually. Actuated through electromagnets, unit can be connected in vacuum tube plate circuits or can be operated by any contacting device. Standard unit has 24-v dc or 110-v dc coils. Case is die-cast, and figures are either white or fluorescent on black. Made by **Abrams Instrument Corp.**, 610 E. Shiawassee St., Lansing 1, Mich.

Mention Item NED-6305 when writing

MILL BOXES

(Maybe you call them "TOTEBOXES")

SPEED-UP PRODUCTION WITH *"Bal-Bilt"* BOXES

Made to RESIST HEAVY WEAR!

for ASSEMBLING CARRYING SORTING INSPECTING *and many other special purposes*

BAL makes them in all sizes,—short, tall, wide or narrow, with or without compartments or dividers. *ALL* of them hard, vulcanized fibre, reinforced at *all* wear-points, with hardwood runners, with or without handles.

Use them to speed-up production; to promote orderly flow of parts; prevent loss; *measure* a day's production; simplify handling. And be sure you get BAL-BILT guaranteed quality.

Write, stating size, quantity and purpose required.

"SINCE 1898"

BAL

WILLIAM BAL CORPORATION

11 Johnson Street, Newark 5, N. J.

Mention Item NED-6307 when writing

MERCOID

MERCURY SWITCHES

Universally Known for Their Superior Quality and Workmanship

They are not affected by dust, dirt or corrosion and have many definite applications where open contacts are not suitable. Various types available. MERCOID is your guarantee of the best in mercury switches. Further information sent upon request.

LET MERCOID SOLVE YOUR CONTROL PROBLEMS

They rank first for convenience of adjustment—dependable service and long life.

They are designed for various applications requiring the control of pressure, temperature, liquid level and mechanical operation.

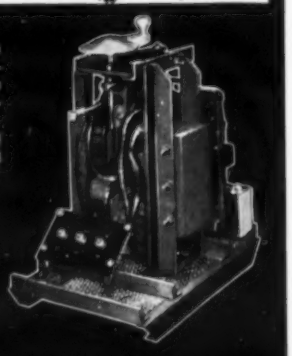
Complete Mercoid Catalog sent upon request.

THE MERCOID CORPORATION, 4201 BELMONT AVE., CHICAGO 41, ILL.

Mention Item NED-6308 when writing

here's the INSIDE STORY of *better* production welding

The "heart" of any welder is the transformer—and the new Sureweld A-C Arc Welder has a new and different patented 4-coil transformer—with a movable shunt—that gives new and unequalled welding performance. You should see the new Sureweld in action!



Sureweld . . . assures fine welding characteristics at all amperages; permits practical low-current welding; gives the exact welding heat required; gives the "push" that means faster burn-off, proper penetration and correct breakdown of usually hard-to-handle alloy rods.

NEW

Sureweld

A-C ARC WELDER

This is the welder with an entirely new design concept you *must* see before you can say you are completely satisfied with your present equipment. The new Sureweld A-C Arc Welder is in a class by itself for superior performance and *greater economy*.

Seven Industrial Models rated from 200 to 1000 amps. (Five Shop Models for maintenance and light production). Find out for *yourself* why production men and welders everywhere are hailing the new Sureweld as a *revolutionary new tool*. A free demonstration in your plant or shop can be arranged.

Write for Free Illustrated Book, "New Era in Welding"

Consult your nearest NCG office or write to:

NATIONAL CYLINDER GAS COMPANY

846 North Michigan Avenue Chicago 11, Illinois

NCG

EVERYTHING FOR WELDING

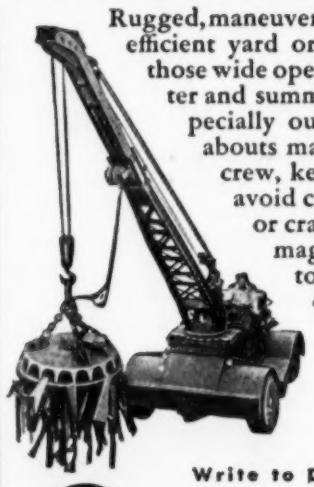
Copr. 1949, National Cylinder Gas Co.

Mention Item NED-6302 when writing

Don't Overlook Savings From Yard Efficiency With

ROUSTABOUT CRANES

The fast tractor-footed load-hustlers



Rugged, maneuverable, the answer to efficient yard organization — make those wide open spaces pay! Winter and summer, indoors but especially out, versatile Roustabouts make 2 men a whole crew, keep things moving, avoid costly delays. Wheel or crawler type, hook or magnet loads to 7½ tons, built for years of overwork. Make your yard contribute to profits, too . . . write for the money-saving facts, today!

Write to Dept. P-5

HUGHES-KEENAN CORPORATION
DELAWARE, OHIO, U. S. A.
Load-Handling Specialists since 1904

Mention Item NED-6306 when writing

AMES

FEATHER-LIGHT POCKET-SIZE THICKNESS MEASURES

For instant, accurate checking, *anywhere*, of *anything* from filaments to tile, Ames feather-light pocket-size dial micrometers are perfect. With exclusive features — automatic, uniform contact pressure, fixed parallel contacts, direct reading count hands — everyone gets the same rapid, precise reading. Models with dial graduations in .0005", .001", .01 mm or Leather ounces. Dimensions, 1⅝" dia. dial; ¼" thick; wt. 1½ oz. Each gauge packed in handsome leather case.

Representatives in principal cities. B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

AMES COMPACT BENCH-MODEL DIAL COMPARATOR No. 2

Stable, compact design of the lightweight Ames No. 2 Dial Comparator makes it ideal for impersonal bench inspection. Ideal for checking sheet materials to ASTM specifications when equipped with dead weights and proper contact points. Dial graduations available — .001", .0005", .0001". 2" dia. table easily adjustable to bring pointer to "0". Fingertip lever raises contact for rapid insertion pieces. Send for descriptive folders on these gauges.

Mention Item NED-6309 when writing

Good for All Pressures... without Change of Valve or Seat

- Quicker Heating
- Small Size
- Light Weight
- One Moving Part
- Low Price

OVER 600,000 SOLD

Sold by nearly 150 Mill Supply Distributors throughout the U.S.A. See your supply house or write for Catalog T-1739

YARNALL-WARING CO., 131 Mermaid Ave., Phila. 18, Pa.

YARWAY

IMPULSE STEAM TRAP

Mention Item NED-6311 when writing

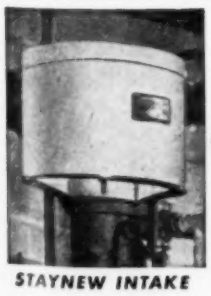
HYDRAULIC POWER

UP TO 100 TONS!

You'll find a hundred uses for a Hein-Werner Hydraulic Jack in your plant. These time-saving, labor-saving jacks are great for pushing, bending, moving or lifting, where trouble-free power up to 100 tons is required. Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity. For complete details consult your industrial supply distributor or write us.

HEIN-WERNER CORPORATION
WAUKESHA, WIS.

Mention Item NED-6312 when writing



STAYNEW INTAKE FILTER

3761 HOURS OF CONTINUOUS OPERATION WITHOUT ATTENTION

Yet Filter Resistance is Only 2.73 in. of Water

This filter, installed on a Diesel-powered compressor, operates under unusually severe conditions . . . intake air being heavily loaded with dust and oil.

Such performance is not unusual. Reports are frequently received of Staynew Filters operating satisfactorily for two or more years without attention.

More and more operators specify Staynew Filters for tough jobs, not only because of the minimum attention required, but because they:

- Provide positive protection
- Require no pre-coat or Filter aid
- Permit use of oversize filters (air velocity not critical)
- Are unaffected by temperature extremes

DOLLINGER CORPORATION
49 CENTRE PK.
ROCHESTER 3, N. Y.

Write for Literature

DOLLINGER PROTECTOMOTOR STAYNEW FILTERS

Mention Item NED-6313 when writing

NUMBERING MACHINE
automatically marks tape or strip

At each actuation of solenoid, machine applies inked consecutive number on tape or strip. It can be mounted on table or conveyor, and as material passes through it, electric contact causes solenoid to impress number quickly so that continual movement of material is not impeded.

Typographic numbering machine is used, and felt inking roll moves across face of numbers at each up stroke. Force of impression actuates consecutive action of numbering wheels. No adjustment is necessary except for thickness of tape. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

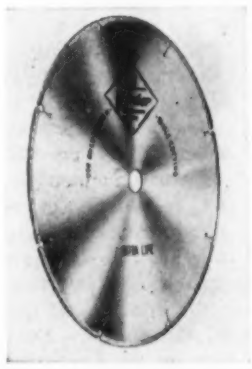
Mention Item NED-6314 when writing

TOOL AND DIEMAKERS' LIGHT
reduces eyestrain on precision work

Designed so that it will not reflect back into workers' eyes and adjustable to concentrate on working spot, Uneeda Light now employs long lasting filament. It is recommended for getting into nooks and crevices difficult to reach with ordinary light, for lining up punches in dies or working with scriber in close places. Various attachments include two different size bulbs, mirror reflector and reflector caps or shields for throwing light in any desired area. Light can be extended 24 in. from base in any direction or attached to wire which worker can maneuver with his hands. Price is $12.50. Made by **Twentieth Century Mfg. Co.**, 3734 Montrose Ave., Chicago 18, Ill.

Mention Item NED-6315 when writing

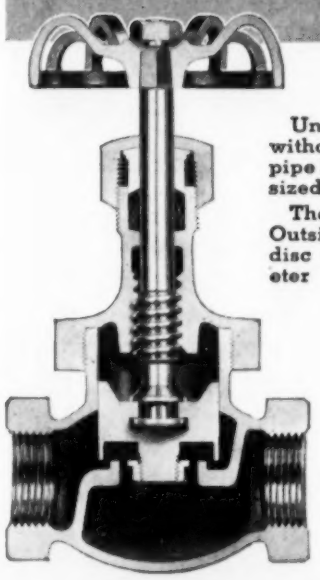
DIAMOND BLADE
for cutting dense masonry material



Rough edge of this diamond blade produces fast cutting through quick elimination of chips but will not leave rough edges on work. Usable for cutting of stone or other dense materials, it has body of stainless steel with slots and holes worked into periphery for cool operation. Blade must be water cooled while in use, and it is designed for long operating life. Made by **Victor Engineering Corp.**, Bristol, Pa.

Mention Item NED-6316 when writing

GET FULL FLOW FROM YOUR PIPE LINES



Undersized ports and discs without full lift can throttle your pipe lines as seriously as undersized pipe.

The port of an O-B No. 11 Outside Bonnet composition disc valve matches pipe diameter exactly. The high lift of the renewable disc cuts flow resistance to a minimum.

Get full flow from your pipe lines by installing O-B's No. 11 line on all your 150-lb. W.S.P. services.

OHIO BRASS CO.
MANSFIELD, OHIO

3006-V

Ohio Brass VALVES

Mention Item NED-6317 when writing

1 OUT OF 2

MANAGEMENT MEN constitute 50% and PURCHASING AGENTS constitute 50% of the users of MacRAE'S BLUE BOOK.

ALL users are located at the largest and most important purchasing points in American industry.

and 91.9%

of all users say they refer to MacRAE'S BLUE BOOK "principally" or "exclusively."

For space rates, consult your agency. Send for copy of a new booklet, "Where Orders Originate."

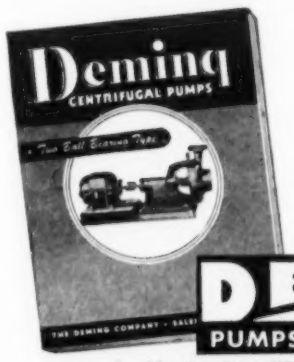
MacRAE'S BLUE BOOK
18 E. Huron St.
CHICAGO 11, ILLINOIS

ALL in ONE BOOK
57th Edition Closes December 15, 1949

Mention Item NED-6318 when writing

Modern Features
IN DEMING CENTRIFUGAL PUMPS

Separate liquid end is one outstanding feature of these two ball bearing centrifugal pumps. Only the liquid end parts need be made of special alloys for handling corrosive liquids. Support head can be standard cast iron construction with resultant economy to you.



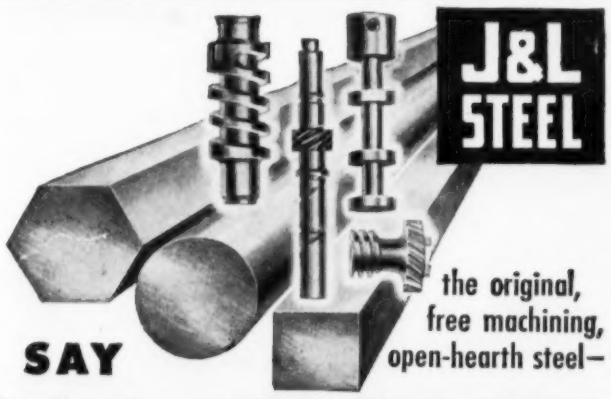
BULLETIN 4012-A

16 pages of information on Deming single stage, side suction, two ball bearing type Centrifugal Pumps. (Made in sizes 1 to 10 inch discharge with capacities 10 to 3600 gallons per minute.)

THE DEMING COMPANY
520 BROADWAY • SALEM, OHIO

DEMING THE COMPLETE LINE PUMPS AND WATER SYSTEMS

Mention Item NED-6319 when writing



J&L STEEL

SAY "J&L JALCASE" the original, free machining, open-hearth steel—

If you want something GOOD in—
machinability • heat-treating properties
physical properties

★ available in a range of grades to suit a wide variety of applications.

★ supplied as cold-drawn or cold-drawn-with-metallurgical-processing, which includes special tempering.

Typical Jalcase analyses are found in the A.I.S.I. 1100 series wherein the manganese content is 1.00% to 1.65%, such as in Grades C-1117 through C-1144.

For more information about J&L Jalcase, write to us for your free copy of our Jalcase booklet.

Jalcase steel is quality-controlled from our own mines through the finished product.

JONES & LAUGHLIN STEEL CORPORATION
456 Jones & Laughlin Building, Pittsburgh 19, Pennsylvania

Mention Item NED-6320 when writing

NEW STANLEY UNISHEAR CUTS 18 GAUGE

No. 218

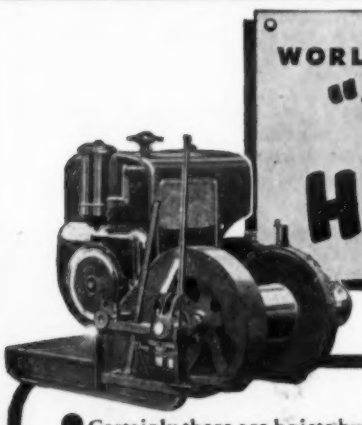
Weighs only a little more than a pair of snips. Cuts your costs on sheet metal work. Zips through 18 gauge steel at speeds up to 15 feet a minute . . . straight ahead, curves, angles, notches . . . inside or out . . . right to the line. "Feeds in" the work so operator only has to guide it. Blades easily removed for sharpening. Sturdy aluminum alloy housing, ground gears, ball and roller bearings, slide operated switch, duplex handle. A favorite production tool for fast cutting of sheet metal. Sold through your industrial distributor. Write for literature. Stanley Electric Tools, 563 Myrtle Street, New Britain, Connecticut.

STANLEY
Reg. U.S. Pat. Off.

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

Mention Item NED-6321 when writing

WORLD'S SMALLEST "BIG HOIST"



9104

Certainly there are hoists built smaller than this American Model 25A General Purpose Hoist . . . in fact, we build them ourselves. But when you want "big hoist" features, and "big hoist" performance, here's the finest, lightest, lowest-cost model you can buy!

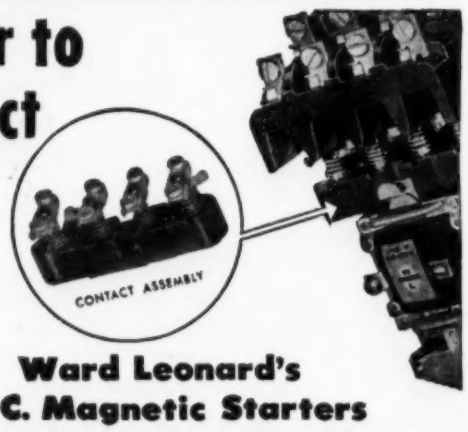
Delivers 2500 lb. single line pull with 18 H.P. engine. Has famed American contracting band clutch, and super-safe brake of same type. Chisel type dog, working in compression . . . welded steel bed and frame.

Made in single and double drum sizes, gasoline or electric powered. Four other models in General Purpose line offer 4000, 5500, 7500 and 10,000 lb. single line pull. For prices and literature, see your distributor or write us direct.

American Hoist and DERRICK COMPANY
St. Paul 1, Minnesota
Plant No. 2: So. Kearny, N. J.
Sales Offices: NEW YORK • PITTSBURGH • CHICAGO

Mention Item NED-6322 when writing

easier to inspect



Ward Leonard's A. C. Magnetic Starters

Ease of inspection is one of the many features of Ward Leonard's sizes 1, 2 and 3 across-the-line non-reversing A.C. magnetic starters.

Removing a single key permits the entire moving contact assembly to be withdrawn for inspection of all main silver contacts, both moving and stationary.

And it's easier to replace main stationary contacts, too, due to the use of individual spring retaining clips.

Write for Bulletin 4110. Ward Leonard Electric Co., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls
RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

Mention Item NED-6323 when writing

HIGH SPEED JIG SAW
directly driven by ¼-hp motor

Available in two models with 18 and 24-in. throats, type BB Speed-Cut jig saw will make inside and outside cuts and handle wood up to 2 in. thick. It will also cut thin soft metals, plastics, fiber, brake lining and similar material, as well as rip boards any length. Features include full-length tilting table, front-end lock and quadrant, enclosed steel cabinet, wide leaf upper and lower tension springs and fast blade change arrangement. Easily portable, saw weighs 56 lb complete with GE motor. Made by **Beebe Bros., 2718 Sixth Ave. S.,** Seattle 4, Wash.

Mention Item NED-6324 when writing

HAND TYPE COUNTING DEVICE
comfortably held by finger ring

This compact precision hand tally unit is useful for counting traffic, inventory, production units, machines in and out of operation and items in warehouses, shipping areas and receiving rooms. Slight pressure on operating lever registers one count, and device registers to 10,000 and repeats. It is quickly reset to zero by turning reset knob. It has easily read figures on black background, is finished in perspiration-resistant gray polymerin lacquer and has smooth edges. Price is $7.50. Double model can be supplied for use where more than one type of object is to be counted. Made by **Veeder-Root, Inc.,** 19-P Sargeant St., Hartford 2, Conn.

Mention Item NED-6325 when writing

RECORDER
for dictation or telephone recording

Similar to standard Disc Edison Voicewriter for office dictation, model 88000 instrument contains built-in selector switch for choice of either type recording. Device is supplied with extension cord and special plug for connection to telephone company's recorder connector. No other wiring or installation work is required as Voicewriter supplies power and switching means for controlling recorder connector. Made by **Thomas A. Edison, Inc.,** Ediphone Div., 36 Lakeside Ave., West Orange, N. J.

Mention Item NED-6326 when writing

"COMMERCIAL" BASIC PARTS FOR *Air Conditioning and Heating* EQUIPMENT

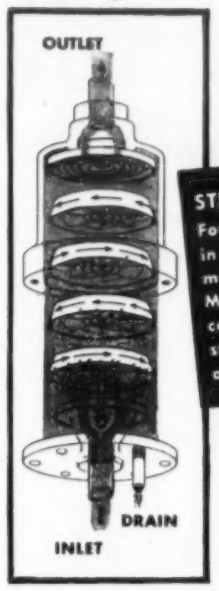
FAN HOUSINGS
OIL BURNER TANK HEADS
OIL BURNER TANK SUPPORT LUGS
HOT AIR FURNACE HEADS
HOT AIR HAT PIPES
HOT AIR CRESCENT HEADS
WATER HEATER TOPS
WATER HEATER LEGS
RANGE BOILER HEADS AND BOTTOMS
TANK HEADS

Write for Literature

THE COMMERCIAL SHEARING AND STAMPING COMPANY.
YOUNGSTOWN · 1 · OHIO · U.S.A.

Mention Item NED-6327 when writing

Why does an ARIDIFIER REMOVE 92% OIL, WATER AND DIRT FROM GAS AND AIR LINES?



STUDY EXPLODED VIEW FOR ANSWER
Four multi blade rotors revolve at high speed in opposite directions under impact of air movement through non-aligned rotor spaces. Moisture, dirt and other foreign matter which collect on rotor blades are thrown out of air stream by centrifugal force to side of housing, and pass into drain.

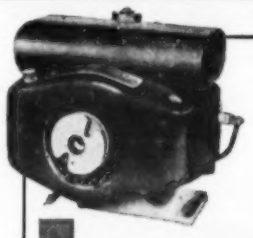
For paint and lacquer spraying, ceramic, sand blasting, air cleaning, etc. Easily replaces less efficient baffle type devices. Tell us details of your problem when you write for a catalog.

CAPACITY RANGE: AS LOW AS 7 CFM TO 17,000 CFM.

Made By The Manufacturers of Logan Lathes and Shapers.

Logan ENGINEERING CO.
4904 W. LAWRENCE AVE., CHICAGO 30, ILL.

Mention Item NED-6328 when writing



2 horsepower and only 23 pounds

POWER PRODUCTS *New "Twin"*

This is it! The twin-cylinder air-cooled "Two Horse" that Power Products, the **pioneer in light metals engines,** has had in the works for over a year . . . an incredible 23 pounds!

It Halves Your Engine Weight

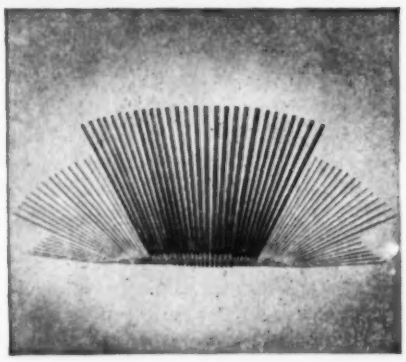
Here's that new "edge" on competition for you. No sacrifice of ruggedness but only half the usual weight, a beautifully streamlined, compact engine. Easy-starting, extremely tiltable, its twin opposed cylinders give you smooth, vibration-free operation.

If portable or mobile power is your problem . . . if you make power mowers, garden tractors, pumps, compressors, chain saws

Write POWER PRODUCTS CORPORATION
GRAFTON 7, WISCONSIN

Mention Item NED-6329 when writing

FACTS AVAILABLE ON SELECT "70"



Descriptive literature covering mild steel, low alloy and special steel, stainless steel, hard surfacing and build-up, and other special electrodes is available on M & T's "SELECT 70"—seventy electrodes designed to cover all arc welding requirements — AC or DC, all-position or downhand work welding of mild steel, low alloys and stainless steels as well as hard surfacing and build-up.

Literature covers specifications, properties and applications for each electrode. Copies available on request received on company letterhead.

METAL & THERMIT CORPORATION
120 Broadway • New York 5, N. Y.
CHICAGO CINCINNATI CLEVELAND HOUSTON MINNEAPOLIS
NEWARK PHILADELPHIA PITTSBURGH SO. SAN FRANCISCO TORONTO

Mention Item NED-6330 when writing

Lowest over-all cost for light—with

G-E MERCURY LAMPS

- LOW CURRENT CONSUMPTION
- LOW INSTALLATION COST
- LOW MAINTENANCE COST
- LOW REPLACEMENT COST

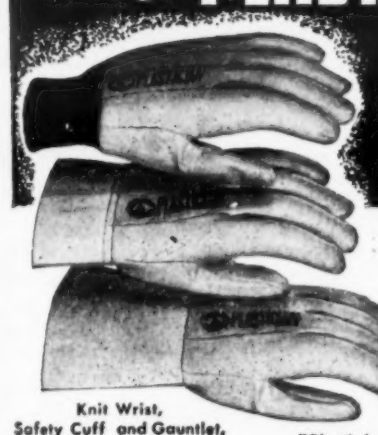
3 sizes—250, 400 and 3,000 watts. See your G-E lamp supplier or write General Electric, Nela Park, Cleveland 12, Ohio.

GENERAL ELECTRIC

Mention Item NED-6331 when writing

Cut Glove Costs with "PLASTIGLUV"

The Industrial Safety Glove that WEARS LIKE IRON!



Knit Wrist, Safety Cuff and Gauntlet, also Ladies' Styles

Plastic Coated and Impregnated for Long Hard Wear

Get more hours of wear per dollar with Belle City's tough new "Plastigluv"! Full cut and comfortable, with cotton fabric base, "Plastigluv" is superior in every respect to neoprene rubber coated gloves and ordinary leather palm gloves.

Note these outstanding "Plastigluv" features: High dielectric strength For longer lasting—no exposed seams • Acid, alkali, heat and flame resistant • Impervious to most oils • Waterproof • Abrasion-resistant • Non-slip finish • Conforms to hand's natural grip, effecting smooth palm grasp • Complete flexibility makes it serviceable for any job • Easily washed—dirt can't penetrate • Ideal for use in all industries.

Factories in Racine, Wis. and Kewanee, Ill. • Write for information and prices

BELLE CITY GLOVE COMPANY
112 EAST CHESTNUT ST. • CHICAGO 11, ILLINOIS

Mention Item NED-6332 when writing

BROWN & SHARPE

GROUND FLAT STOCK

An Important Cost Saver!

By making templates, cutting tools, gages, test tools, machine parts and other items of Brown & Sharpe Ground Flat Stock, accurately ground to within .001" in thickness, you can avoid expensive, difficult grinding operations.

Regular stock sizes include 13 different thicknesses; widths up to 6", also square sizes. Each item individually packaged. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

We urge buying through the Distributor

BROWN & SHARPE

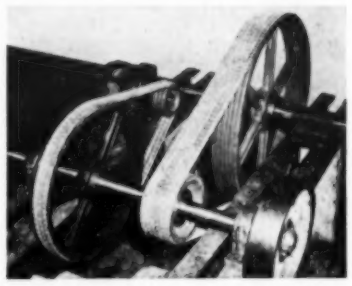
Mention Item NED-6333 when writing

DRILL PRESSES
15-in. series has ½-in. capacity

This drill press series consists of seven models, bench and floor types, in tilting table or 1, 2, 3, or 4-spindle production models. Chuck capacity ranges from No. 70 to ½-in. Jacobs chuck with No. 1 Morse taper optional. Presses have 2¾-in. quill, 4½-in. stroke and short 6-spline spindle. Spindle speeds range from 625 to 4800 rpm in standard models, and from 490 to 3000 rpm on slow-speed models. With speed-reducing attachment, spindle speeds as low as 185 can be obtained. Made by **Famco Machine Co.**, 1343 Eighteenth St., Racine, Wis.

Mention Item NED-6334 when writing

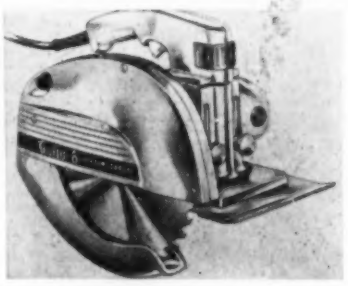
DETACHABLE V-BELTING
to service emergency breakdowns



Especially designed to eliminate large endless belt inventory, Vee Ply belting can be adapted to most V-belt drive applications and is particularly suitable for drives that require dismantling part of machine to install endless belts. It is uncoupled easily from roll stock as needed and is adjustable to any length. Because belting is flexible, internal friction is low, thus allowing ample horsepower ratings at small sheave diameters. However, this belting is not recommended for severe shock loads or for use on drives that are underbelted. Made by **Worthington Pump & Machinery Co.**, Multi-V-Drive Sales Div., Clinton St. & Roberts Rd., Buffalo 6, N. Y.

Mention Item NED-6335 when writing

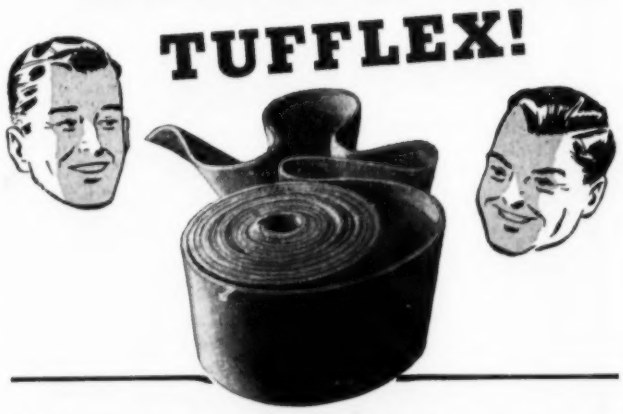
PORTABLE SAW
for maintenance and carpentry



Powered by 110-v universal motor with no-load speed of 5500 rpm and load speed of 2800 rpm, model A-8 Guild saw has sufficient power and cutting speed to handle general construction work. Tilt attachment can be obtained which enables saw to cut any angle from 45 to 90 degrees. Abrasive cutting wheels are available also for work with tile and metal. Maximum depth of cut is 2⅞ in. Standard equipment includes 8-in. combination blade for ripping and cross-cutting, 10-ft three-conductor cord with plug and ground lead, wrench and tube of grease. Made by **Porter-Cable Machine Co.**, 1710 N. Salina St., Syracuse 8, N. Y.

Mention Item NED-6336 when writing

"—and then we heard about TUFFLEX!



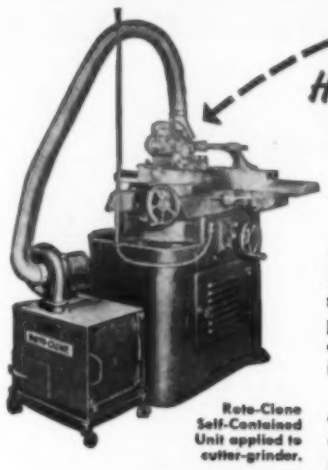
Looking for just the *right* material to solve some special manufacturing, shipping, sound deadening or industrial insulating problems? Many a manufacturer has ended his search with Tufflex—the remarkable felted wood fiber blanket that does so many things so well! Soft as felt—tough and resilient—high in insulation and sound deadening efficiency—Tufflex is easily fabricated to any size or shape, cutting with clean edges. Tufflex is available in rolls or sheets of various thicknesses, densities and widths—can be obtained in moisture resistant and flame retardant forms. Let us tell you the whole story about Tufflex—write Wood Conversion Company, 127-99 First National Bank Building, St. Paul 1, Minnesota.

TUFFLEX*

MADE BY THE MAKERS OF Balsam-Wool

*REG. U. S. PAT. OFF.

Mention Item NED-6337 when writing



Handcuff DUST at its source

Roto-Clone Self-Contained Unit applied to cutter-grinder.

DUST on the loose breeds trouble. Workmen, machinery, plant and product — all are handicapped where process dust is not controlled.

The Roto-Clone system of dust control picks up dust-laden air at its source, separates the dust, delivers the collected material to storage hopper or disposal point and expels clean air all in a single operation — with one moving part. It is compact and economical to install.

Roto-Clones are available in a size and type to handle dust separation efficiently over a wide range of particle sizes and specific gravities. Write for complete information.

AMERICAN AIR FILTER COMPANY, INC.
391 Central Ave., Louisville 8, Ky.

IN CANADA:
DARLING BROS., LTD.
MONTREAL, P. Q.

AAF

ROTO CLONE DUST CONTROL

Mention Item NED-6338 when writing

One Metron HAND TACHOMETER measures 20 to 100,000 RPM! or 2 to 10,000 FPM!

LINEAR or rotational speeds that creep or streak — measure them all to 1% accuracy (or better!) with a single Metron Hand Tachometer! Exclusive electric, non-generator type circuit is unaffected by over-speeding, magnetic fields, or vibration. Instant calibration. No variation in accuracy after long, hard use.

Other Metron Hand Tachometers in single or multiple ranges; with or without high and low speed range multipliers; types for measuring to 1/4% accuracy.

Get complete data now from METRON INSTRUMENT COMPANY, 436 Lincoln Street, Denver 9, Colorado

Metron Products:
Tachometers
Comparators
Speed Changers

Metron INSTRUMENTS FOR PRECISION MEASUREMENTS

Mention Item NED-6339 when writing

Cut CLOGGING AND VACUUM Losses . . .

. . . with the Beaumont Rotary Feeder

A renewable brass strip recently added to the Beaumont Rotary Feeder:—seals the upper portion of the rotor; prevents fine chemicals, soot or ash from collecting between rotor and sideplates; protects bearings; eliminates clogging; and greatly reduces vacuum or pressure losses in the system. Sizes range from 4 to 12 inches, or larger if desired.

In chemical as well as food, power and mineral fields—Beaumont Rotary Feeders are ideal for fine material handling. For coarse or lumpy materials, Beaumont manufactures other types of feeders and gates. Write for complete information to:

BEAUMONT BIRCH COMPANY
1514 RACE STREET • PHILADELPHIA 2, PA.

Designers Manufacturers Erectors

Mention Item NED-6340 when writing

TOUGH FASTENING JOB?

(Illustrated) Model 121 Chicago Automatic Rivet-Setter

CHICAGO RIVET & MACHINE CO.
9606 W. Jackson Blvd., Bellwood, Ill. (Chicago Suburb)
Automatic Rivet-Setters • Tubular and Split Rivets in all Rivet Metals C-5

Mention Item NED-6341 when writing

A TOOL BOX AT YOUR FINGERTIPS

SET NO. 1 FOR SMALL SHOPS

Continental Interchangeable Counterbore sets give you a wide variety of cutting tools in a compact, convenient form. Three sets are available, for the large or small toolroom. Each set features the famous Continental indestructible drive that will not stick, will not break, and is always hand detachable. Full details are given in Bulletin D27161. Send for your copy.

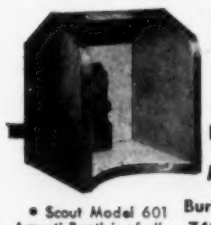
CONTINENTAL TOOL WORKS
Division of Ex-Cell-O Corporation
Detroit 32, Michigan

CTW

Mention Item NED-6342 when writing

PREVENT COSTLY TELEPHONE MISTAKES by HEARING WELL

While telephoning from a noisy shop location, a mis-heard word, order, or dimension can often result in costly mistakes. You owe it to your business to provide a quiet place for telephoning. This can be had for as little as 7¢ a day with a Burgess-Manning Model 211 Acousti-Booth. Its thick walls of sound-absorbent material soak up intense shop noises. A zone of quiet inside the booth provides a quiet, restful place to hear well. Conversations are clearer . . . "private." Airy . . . easily moved . . . sturdy construction. Ideal, also, for noisy locations in stores, hotels, railroad and airport terminals.



Order Burgess-Manning Model 211 Booth, Today

• Scout Model 601 Acousti-Booth is of all-wood construction. Ideal for noisy spots in hotels, airport terminals. • Model 602 is of rugged, all-steel construction. Ideal for noisy, congested locations in plants.

MAIL COUPON FOR FREE BULLETIN

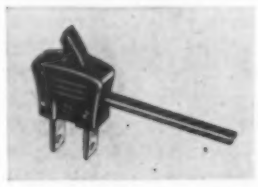
Burgess-Manning Company
743-C East Park Avenue, Libertyville, Illinois

Please send illustrated booklet describing the Burgess-Manning Model 211 Acousti-Booth.

NAME _____
FIRM NAME _____
STREET-CITY _____

Mention Item NED-6343 when writing

ELECTRIC PLUG
clamps easily on appliance cord



For use on all standard No. 18 two-conductor rubber, plastic or rayon-covered parallel cords, this Underwriters' Laboratories approved Quick Clamp-On plug is attached without stripping insulation or twisting wires.

End of cord is cut off square with pair of pliers making certain copper wires do not stick out from insulation; cord is slit between wires slightly; then inserted in side of cap; and clamp is pressed down. Because of side outlet, cord stays close to wall and Hold-Tight brass blades hold cap securely even in loose outlets. Made by **Monowatt Inc.**, 101 Hathaway St., Providence, R. I.

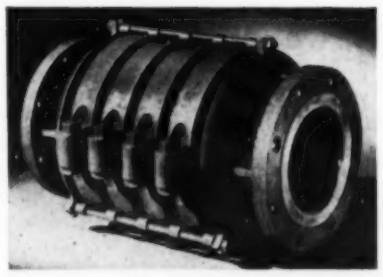
Mention Item NED-6344 when writing

COOLANT PUMP
delivers 40 gpm at 10-ft head

Featuring large multiple upper inlet cast into upper section of impeller housing and independent flanged vertical tubular housing between motor and impeller housing, model UD-8110 Gusher coolant pump also has ample clearance between motor and straight vertical discharge pipe. Standard pump is of cast iron, but it can be furnished in other metals or alloys. Shaft is supplied in standard cold-rolled or stainless steel. Totally enclosed ¼-hp driving motor is provided with large conduit box and prelubricated-for-life ball bearings. Made by **Ruthman Machinery Co.**, 1810 Reading Rd., Cincinnati 2, O.

Mention Item NED-6345 when writing

EXPANSION JOINT
does not require use of packing



Expansion and contraction resulting from temperature changes in steam, liquid and gas pipe lines are absorbed by Corruflex expansion joint. It is suitable for use in remote and difficult-to-service locations, and its compactness permits use in trenches, tunnels or other cramped quarters. It is available in sizes from 3 to 24 in., with single or multiple corrugations, with or without self-equalizing rings, in single or double units and with flanged or welding ends. Copper, stainless steel or other alloy constructions can be furnished, and internal sleeves can be supplied if required. Joint will operate under pressures from vacuum to 300 psi and temperatures from subzero to 1600° F. Made by **American District Steam Co.**, North Tonawanda, N. Y.

Mention Item NED-6346 when writing

here's what Marvinol* vinyl resin offers you . . .

FASTER PROCESSING . . . Laboratory tests and production runs prove that Marvinol gives you shorter pre-mix, open mill and Banbury cycles . . . faster extrusion.

SUPERIOR CHARACTERISTICS . . . Marvinol offers you higher dimensional stability under heat and time . . . greater flexibility at low temperatures . . . extra toughness and dryness. Products made from Marvinol resist heat, light, oils, acids, aging, wear, tear and abrasion.

HIGH PROCESSABILITY . . . Marvinol may be calendered, extruded, injection molded, dispersed for coatings or slush molding . . . may be formulated into rigids, semi-rigids, elastomers.

THE GLENN L. MARTIN COMPANY makes and sells Marvinol vinyl resins as raw materials for processors, but we will be glad to refer you to one of our customers if you're interested in Marvinol in more finished stages. Write to Chemicals Division, Dept. NE-9, The Glenn L. Martin Company, Baltimore 3, Maryland.

Marvinol

Resins, Plasticizers and Stabilizers Produced by the Chemicals Division of
THE GLENN L. MARTIN COMPANY • AN INTERNATIONAL INSTITUTION
"Better Products, Greater Progress, Are Made by Martin."

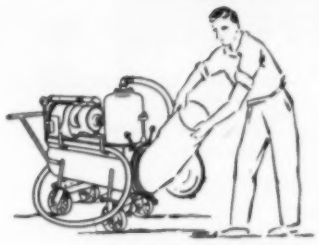
* Registered trade name of The Glenn L. Martin Company

Mention Item NED-6347 when writing

Mobile

Keeps

Place both hose machines the switch and Houdaille Filter draws coolant, p filtering chamber. Chips, sludge, and unwanted contamination re the clean coolant is pumped to t



When filter bag is full, merely remove bag, dump sludge, abrasives. The Mobile Coolant Filter, a one-man operation, can efficiently handle a few or a battery of machine tools. For more information write to 405 Wabash Avenue, Lebanon, Indiana, in care of Honan-Crane Corporation, a subsidiary of Houdaille-Hershey Corp.

Mention Item NE 48 whe

How to Cut Ha

Just off the Pr

• These 32 pages contain specific examples how handling costs can be cut . . . substantial Show conveyers at work moving cartons, c boxes, cases, parts and many other produ Illustrate roller, wheel, live roller, belt, ch overhead trolley, and elevating conveyers, special conveying machinery.

If you are interested in cutting hand costs in your plant, you should have this page book.

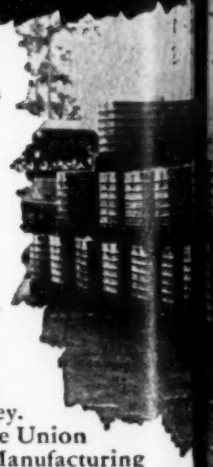
Your copy mailed promptly

MCC

MATHEWS CONE
ELLWOOD CIT
SAN CARLOS, CALIFORNIA

Mention Item NE when

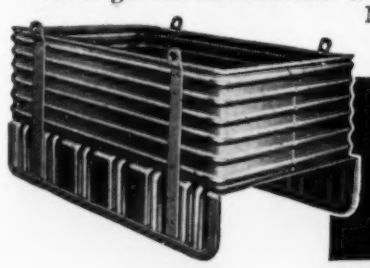
OUTSIDE . . . INSIDE . . .
easy to spot 'em wherever you want 'em



• It's the carefully developed, but often overlooked construction details of Union Metal Boxes, Skids and Pallets that offer you *extra* convenience, *extra* savings in materials handling.

For example, you gain increased storage volume and simplified pick-up with these tiering skid boxes because of the special angle rests inside the skid legs . . . they're easier to stack, easier to move.

Many such "tremendous trifles" as this are incorporated in Union Metal equipment to save you time and money. Better get full information. Write The Union Metal Manufacturing Co., Canton 5, Ohio.

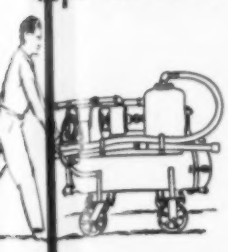


UN
Mater He

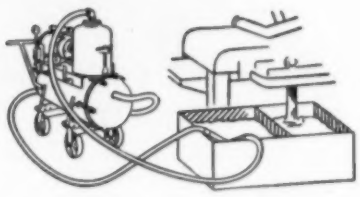
Mention Item N when

Mobile Coolant Filter

Keeps coolants, oils, sumps clean without DOWN-TIME



New Houdaille Mobile Coolant Filter provides coolant-cutting oil clarification without "downing" metal-working machines and cleaning sumps as production continues. Merely wheel the easy-to-handle mobile unit to machine sump whenever filtration is necessary, whole operation takes about 10 minutes.



Mention Item NED-6348 when writing

Handling Costs

Cut Price!

mailed promptly upon request

CONVEYER COMPANY
OLD CITY PENNSYLVANIA
PORT HOPE, ONTARIO, CANADA

Mention Item NED-6350 when writing

UNION METAL
Material Handling Equipment

Mention Item NED-6351 when writing

FILING CABINET
has lift cover for accessibility

Again available after wartime suspension of production, Telefacts two-drawer filing cabinet has swing front and self-adjusting Divide-a-Files drawer dividers to permit quick reference to contents. Mounted on rubber-tired ball bearing casters, cabinet is available in gray, green, walnut and mahogany finishes. It is of desk height, measures 25 in. deep and is constructed of metal. Made by **General Fireproofing Co.**, Dept. NE, Youngstown 1, O.

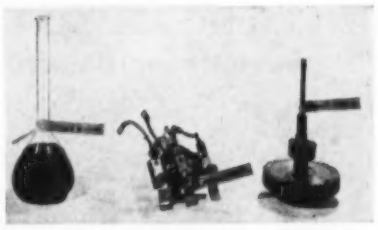
Mention Item **NED-6351** when writing

EXHAUST MUFFLING DEVICE
reduces excessive noise from engines and compressors to acceptable level

Designed for effective noise control for petroleum, chemical and industrial installations, SDG Slug Buster snubber will reduce noise from engine exhausts and vacuum pump discharges to noise level of surrounding industrial area. Device can be installed in either vertical or horizontal position and will not interfere with efficient engine operation because it offers negligible resistance to flow of exhaust gases. Equipped with heavy double shell and internal reinforcements, unit also has flanged dome-type heads for maximum strength. It is explosionproof and designed so tuning of exhaust system is unnecessary for best operation. Made by **Burgess-Manning Co.**, 749 E. Park Ave., Libertyville, Ill.

Mention Item **NED-6352** when writing

INDUSTRIAL METAL TAGS
are locked in place by simple twist



Suitable for marking parts in storage, machinery parts, wires, pipes and various other industrial items Twist-On tags are made of soft zinc with Cronak finish. Tags can be marked with metal or glass marking pencil. Surface of tag has been pressed with fine screen-like pattern which has over 122,000 shallow holes per square inch to hold part of writing below surface of tag for long readability. Cronak finish prevents oxidation or white rust from forming and obliterating writing when tags are exposed to salt spray. When twisted in slot, toothed edge of narrow end of tag holds fast, and tag maintains its position parallel to ground for easy reading. Made by **Twist-On Label Co.**, Dept. NED, P.O. Box 718, Toledo, O.

Mention Item **NED-6353** when writing

FOR CLEANER FLOORS
IT'S LAWLOR

Don't care what kind of floor you have — what its size or condition may be — there's a right Lawlor to clean and wax polish it in a jiffy!

For 50 years Lawlor has specialized in improved floor cleaning equipment — anything from heavy-duty, electrically operated scrubbing units to mopping and wringer sets.

A Size for Every Need

Write today for new Catalog.

S. C. LAWLOR CO., 131 N. Aberdeen St., Chicago 7, Ill.

Mention Item NED-6354 when writing

SUBAC CEMENT
(A patented product)

The only cement which can be used under water WITHOUT DISINTEGRATION when exposed to washing action during or after application.

SUBAC has been used in repairs to underwater structures, bridge foundations, retaining walls, jointing for large storm sewers and repairs on dams.

TESTED AT
Massachusetts Institute of Technology

Our customers include Bureau of Yards and Docks, USN, State Public Works Departments, many railroads, Utility Companies and Mill Owners.

THE CRANDALL ENGINEERING COMPANY
261 Franklin Street
Boston 10, Massachusetts

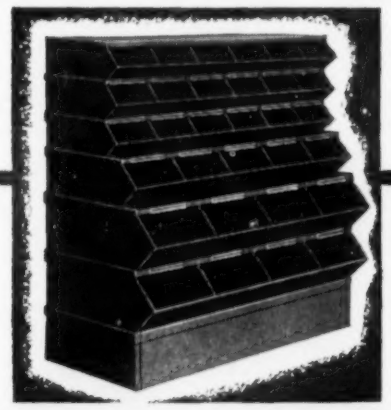
Mention Item **NED-6355** when writing

The **BROOKFIELD** *portable* VISCOMETER

Rapid viscosity readings at point-of-process are far more valuable than remote lab readings not taken under operating conditions. Viscosity control is made practical through the use of this dependable instrument. Highly accurate, yet simple to use — no technical training needed. Readings given directly in centipoises in less than a minute. 4-speed models for non-Newtonian determinations. Send for catalog.

BROOKFIELD
ENGINEERING LABORATORIES, INC.
230 Porter Street, Stoughton, Mass.

Mention Item **NED-6356** when writing



AUXILIARY STOCKROOMS
— Wherever You Need Them!

STACKBIN sections will give you a stockroom wherever you want it — quickly and easily as building a sectional book case. These patented sectional storage bins nest together without the use of tools — cost you nothing to build, nothing to move. Find out today how STACKBINS can lower YOUR handling costs.

IMMEDIATE DELIVERY
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa
Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

Mention Item **NED-6357** when writing

Small, light-weight VANE TYPE ROTARY PUMPS

"UTILITY MASTER" Type UM-1 Pump

★ 10 gal. light liquids per minute
★ 1" ports for heavier liquids
★ Weighs only seven pounds
★ 6¼ inches diameter
★ Easy to crank

Barrel Pump Assembly Type UM-2

¾" I. D. gooseneck for 10 g.p.m. flow from barrels and tanks.

Refueling Assembly Type UM-3

8 ft. gasoline hose and nozzle, 42" inlet pipe, 12" outlet pipe.

Furnished as standard equipment on power shovels and construction tools, this light, compact, low cost pump is now available for general usage. Its zinc die cast body, rotor and body cover are corrosion resistant and finely finished. Stainless steel rotor shaft and bronze blades are supported on two bearings. Shaft seal is easily replaced from outside. Accessories available include foot valve, hose and nozzle, refueling spout and combination-size bung adapter. Write for prices and catalog 4-25A.

LEAR, *INCORPORATED*
ROMEC DIVISION
ELYRIA, OHIO

Mention Item NED-6361 when writing

NEW SHEAVE Varies Speed Without Stopping!

A-2710

★ Instant speed control at lower cost than ever before
★ Covers most speed change needs from 3 to 20 hp
★ Extremely simple—one sheave does all
★ Infinitely variable ratios — 2:1 speed range

Simple, most economical method of instant speed control ever devised. For details, see your A-C Authorized Dealer or Sales Office or write for bulletin 20B7223.

Vari-Pitch is an Allis-Chalmers trademark.

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

A-C ALLIS-CHALMERS

ALLIS-CHALMERS

Mention Item NED-6362 when writing

Lubricating & Industrial Oils *DO NOT WEAR OUT!*

Save by Re-refining with RETROL®

Oils in use collect harmful impurities but do not wear out. Re-refining with Retrol restores excellent quality to lubricating and insulating oils — saving many thousands of gallons of oils which were formerly discarded.

What is Retrol? Retrol is a highly activated adsorbent manufactured especially for the re-refining, decolorizing, purifying and filtering of used lubricating and industrial oils
— using proven petroleum refining principles
— distillation, adsorption and filtration.
Send for free booklet entitled "American Industry Speaks."

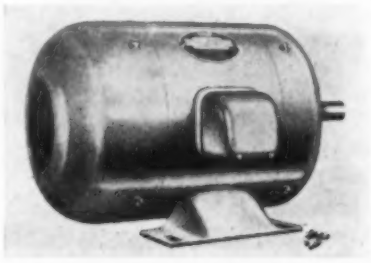
Filtrol products are available throughout the world

Re-refine with RETROL®

FILTROL CORPORATION
634 South Spring Street
Los Angeles 14, California
Please send me your book entitled "American Industry Speaks."
Company_____
Name of Individual_____ Title_____
Address_____
City_____ Zone_____ State_____

Mention Item NED-6363 when writing

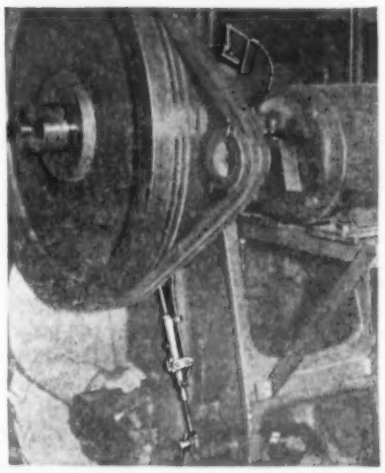
TOTALLY-ENCLOSED MOTOR usable in nonexplosive atmospheres



Cooling is improved in this B-Line motor by fan which directs air directly over stator lamination edges to eliminate dead air space completely. Motor windings as well as brushes and other internal parts are protected by enclosed frame which permits motor to be used where metallic and abrasive dusts are present. Motor is equipped with prelubricated ball bearings, is rated 55° C for continuous duty and can be obtained in single-phase from ½ through 3 hp and in polyphase from ¾ to 3 hp. Made by **Brown-Brockmeyer Co.**, 1002 Smithville Rd., Dayton 1, O.

Mention Item NED-6364 when writing

SAFETY DEVICE for both bench and floor presses

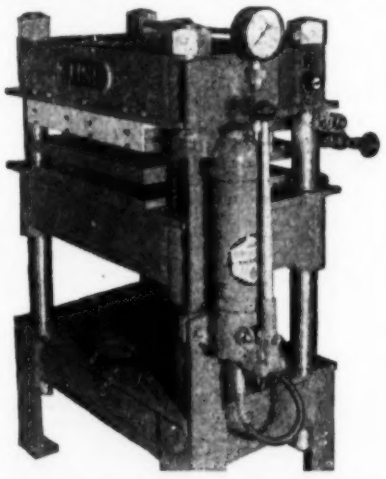


Easily installed on any press, nonrepeat device acts as secondary clutch. Downward action of press ram releases this clutch and allows upper portion of treadle rod to disengage primary clutch on press flywheel. Should press operator continue to hold treadle down, press will not repeat. Return of treadle to up position reengages clutch in nonrepeat device. Made by **Searjeant Metal Products, Inc.**, Dept. P-16, Box 101, Mendon, N. Y.

Mention Item NED-6365 when writing

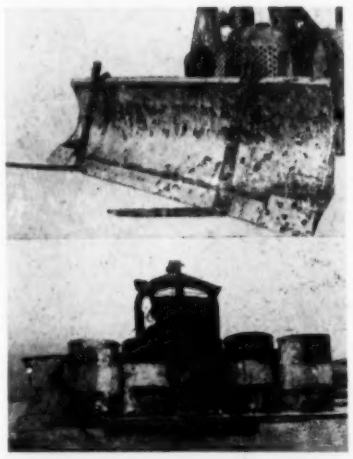
HYDRAULIC PRESSES have capacities from 10 to 50 tons

Suitable for use in laminating and polishing operations where heat and pressure must be applied to material for processing, this hydraulic press series can be operated by means of hand operated pump or small and compact power unit. Accumulator in hydraulic circuit maintains desired pressure with minimum of variation. Platens can be supplied with thermostatically controlled electric heaters or arranged for steam heating with manual controls or automatic thermostat valves. Platen size can be 12 x 12, 20 x 20, or 24 x 30 in. Made by **Link Engineering Co.**, 13849 Elmira, Detroit 27, Mich.



Mention Item NED-6366 when writing

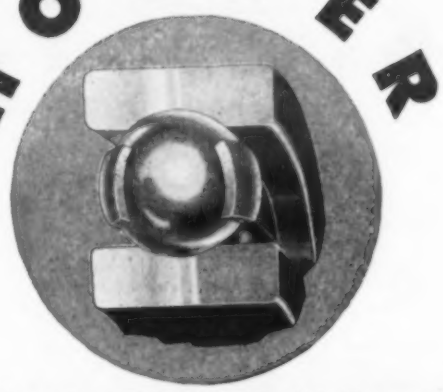
BLADE FORKS enable bulldozer to lift and carry



Crawler type tractor equipped with bulldozer blade can be converted quickly into carrying unit by hanging forks from top of blade and adding planks to make platform 31 in. wide and full length of blade. Forks can be loaded at truck body height or ground level and facilitate moving supplies, material and small equipment over any kind of terrain. Rated for 3000-lb load, they are reinforced at point of stress and have positive locks that will not slip. They are adjustable to fit any blade from 22 to 48 in. in height and can be spaced as desired. Made by **Parkersburg Rig & Reel Co.**, 1160 Depot St., Parkersburg, W. Va.

Mention Item NED-6367 when writing

HOOVER



America's ONLY Ball Bearing with HONED RACEWAYS

1. Extreme quietness.
2. Increased Load Capacity.
3. Extended life.
4. Reduced end play (axial displacement).
5. Reduced radial displacement.
6. Permanence of fit-up.
7. Increased resistance to Brinneling.
8. Uniformity of fit-up.
9. Freedom from vibration.
10. Perfection of dynamic balance.

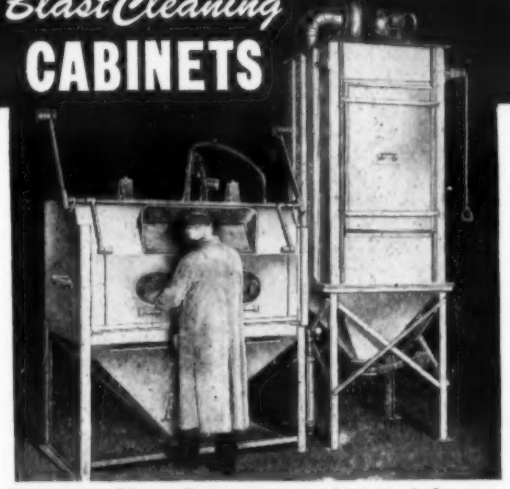
Write on your Letterhead for Hoover Engineering Manual

HOOVER BALL and BEARING CO.
Ann Arbor, Michigan

THE ARISTOCRAT OF BEARINGS

Mention Item NED-6368 when writing

RUEMELIN *Blast Cleaning* CABINETS

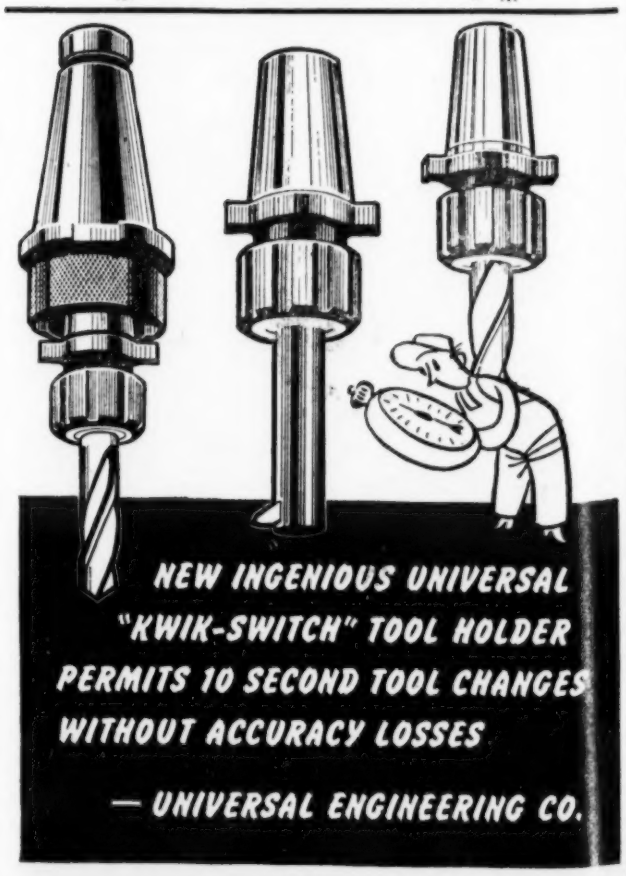


Ruemelin Blast Cabinets are designed for use in metal working plants, foundries, automotive and aircraft maintenance glass, plastics, etc. Built in many sizes. Furnished complete with dust control equipment. A Rotary Barrel 16" diameter can be installed to clean small parts automatically.

Write for Bulletin No. 37-D, just off the press

RUEMELIN MANUFACTURING CO.
3883 N. PALMER ST. • MILWAUKEE 12, WIS., U. S. A.
Manufacturers and Engineers SAND BLAST AND DUST COLLECTING EQUIPMENT, WELDING FUME COLLECTORS

Mention Item NED-6369 when writing



FRANKENMUTH 5, MICHIGAN

Mention Item NED-6370 when writing

Control Uniformity with Precision Weighing . . .

Formula failure is by far the greatest reason for rejection by inspectors in finished goods. High numbers of rejections are not only expensive but largely unnecessary. The answer is better ingredient compounding and nothing will improve compounding more than strict adherence to accuracy in weighing these ingredients. Insist upon fraction-ounce accuracy too. EXACT WEIGHT Scales will stop rejection losses in a much larger degree than you imagine, simply because they apply controls where rejections start—compounding. Exact weighing guarantees uniformity . . . improves the product . . . does the work faster . . . all at considerable saving in labor costs. By removing the scoop and counter balance the unit illustrated may be used for checkweighing. Write for information covering these and other operations.

INDUSTRIAL PRECISION
Exact Weight Scales

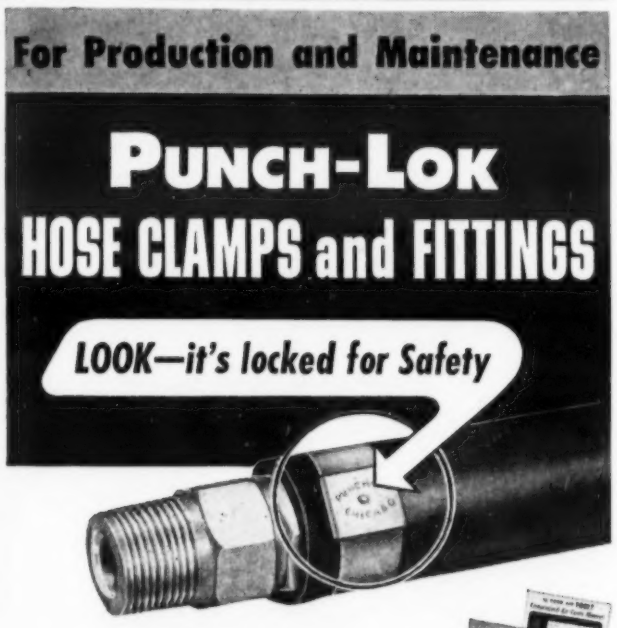
THE EXACT WEIGHT SCALE COMPANY
129 W. Fifth Avenue, Columbus 12, Ohio
2920 Bloor St., W., Toronto 18, Canada

Mention Item NED-6371 when writing

For Production and Maintenance

PUNCH-LOK HOSE CLAMPS and FITTINGS

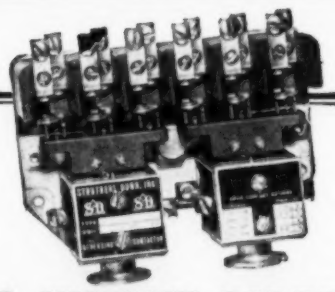
LOOK—it's locked for Safety



Today's Best Bet—For Leakproof Hose Connections
Write for Catalog and Air Leak Cost Chart

PUNCH-LOK COMPANY
Dept. S, 321 North Justine Street, Chicago 7, Illinois

Mention Item NED-6372 when writing



A "NEW" SMALL REVERSING CONTACTOR

for Continuous Duty Control OF AC OR DC EQUIPMENT

Specifically designed for controlling hoists, door openers and similar equipment, the Struthers-Dunn reversing contactor Type 175KXX is ruggedly constructed and designed for continuous duty.

Ratings are:

AC single phase:	1 hp. 115 or 230 volts
AC polyphase:	2 hp. 110 or 220 volts
	1 hp. 440 or 550 volts
Direct current:	1 hp. 115 or 230 volts

Two 3-pole solenoids are mounted on a common frame and mechanically interlocked to prevent simultaneous closure. Contacts are completely insulated with Melamine. Open arc chutes allow rapid cooling.

Auxiliary contacts can be added for electric lock-up or interlock. All corresponding parts are interchangeable and are easily replaceable from the front.

WRITE FOR DATA BULLETIN 7100

STRUTHERS-DUNN
STRUTHERS-DUNN, INC., 150 N. 13TH STREET, PHILADELPHIA 7, PA.

Mention Item NED-6373 when writing

AUTOMATIC TRANSMISSION provides high starting torque and dual speed under constant load

Adaptable to any application requiring automatic speed change and high starting torque, model 00 transmission can be built with up to eight gear ratios. However, at present time it is being produced as two-speed transmission with automatic clutch adapted for Whizzer and other bicycle engines, motor scooters, garden tractors and industrial trucks. It eliminates belt slipping and need of pedaling to assist engine, allows climbing hills and prolongs life of engine by preventing overloading.

When engine is idling, complete slippage takes place in centrifugal clutch driven by inner shaft, and no power is delivered. As engine speed increases, clutch gradually engages, and power flows through spool gears to delivery pulley at 1.7045 : 1 ratio for low gear. As engine speed continues to increase, gear ratio sinks from low until spool gears come to a stop, and both halves of hollow shaft are locked together for direct drive. Price is $29.50. Made by **Powermatic, Inc.**, 312 N. Howard St., Akron, O.

Mention Item NED-6374 when writing

COMMUNICATIONS SYSTEM explosionproof construction permits use in hazardous work areas

This fully-selective electronic intercommunications system has Underwriters' Laboratories approval for Class I, Group D hazardous areas, which include atmospheres containing gasoline, alcohols, lacquer, solvent vapors or natural gas. Selectivty of system allows two-way voice communication between any combination of hazardous and nonhazardous areas.

Any number of stations can be used in system. Basic equipment includes explosionproof spun aluminum trumpet station and switches for hazardous areas, die-cast metal station for nonhazardous areas and amplifier control unit. Person called on system can answer from any reasonable distance without stopping work or manipulating switches. Busy signal sounds when station attempts to originate call while system is in use. Made by **Executone, Inc.**, Dept. C, 415 Lexington Ave., New York 17, N. Y.

Mention Item NED-6375 when writing

IN HERMETICALLY-SEALED REFRIGERATION COMPRESSORS

KLIXON

Dome-Mounted

PROTECTORS

Help Maintain Refrigeration by Eliminating Motor Burnouts

Leading manufacturers of hermetically-sealed refrigeration compressors and users of these units who incorporate them into their equipment use and specify Klixon Dome-Mounted Protectors to prevent motor burnouts and assure long motor life.

The Klixon Protector takes into account the motor destroying factors and shuts off the power should the motor become dangerously overheated. When it cools sufficiently, it turns on the power again enabling the hermetic unit to continue refrigeration.

Regardless of the motor driven products that you manufacture, it will pay you to use motors that have built-in Klixon Protectors. Also specify Klixon Protectors on the transformers, solenoids, variable voltage transformers that you buy. Klixon Protectors prevent burnouts, cut repairs and replacements.

KLIXON

SPENCER THERMOSTAT, Division of Metals & Controls Corporation
1909 Forest Street, Attleboro, Massachusetts

Mention Item NED-6376 when writing

ORIGINAL

ALUMINUM LADDERS

LEFT—Type 100 Bucket Rest Step Ladder. RIGHT—Type 400 Platform Step Ladder.

STEP LADDERS • EXTENSION LADDERS
WAREHOUSE LADDERS • WALL LADDERS
FIRE LADDERS • SHELF LADDERS

"The Original Manufacturers of the Aluminum Ladder"

Aluminum Ladder Company
346 Carbis Street
Worthington, Pa.

Mention Item NED-6377 when writing

MATERIAL HANDLING UNITS

That Cut Down Production Costs

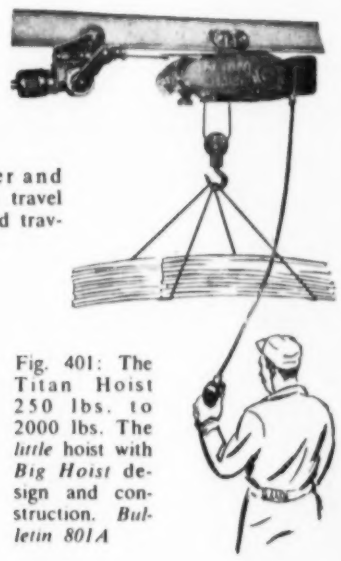


Fig. 460: The Trojan Tractor (Monorail Type) Motor Driven Pusher and Puller for speeding-up travel of hoist and other hand traveled units. *Bulletin 810*

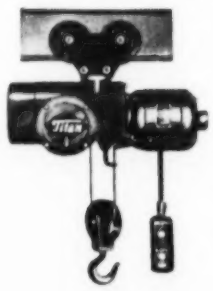


Fig. 401: The Titan Hoist 250 lbs. to 2000 lbs. The *little* hoist with *Big Hoist* design and construction. *Bulletin 801A*

Fig. 426: Motor Traveled, Single Beam Crane. *Bulletin 695*

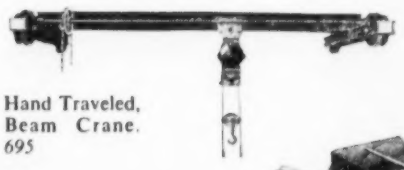


Fig. 71. Hand Traveled, Single Beam Crane. *Bulletin 695*

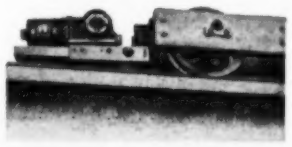


Fig. 372: Electric Winch; capacities up to 6000 lbs. on a single line. *Bulletin 668*

Fig. 470: The Trojan Tractor (Top Mounted Track Type) for power traveling existing hand cranes. *Bulletin 810*

Ask for Descriptive Bulletins and Prices

DETROIT HOIST & MACHINE CO.
8213 Morrow Street • Detroit 11, Michigan

Mention Item NED-6378 when writing

Accurate, Instant Readings on all Speed Ranges...

There's a Direct Reading Type for Every Purpose... or Job.

TYPE U HAND TACHOMETER

Type U Tachometers combine in one instrument five ranges such as 30-12,000 RPM, 45-18,000 RPM, 60-24,000 RPM, 120-48,000 RPM. Many other range combinations. Send for Bulletin No.750 and condensed Tachometer Bulletin No.1046.

Stationary Tachometers furnished to read RPM, Feet Per Minute, Yards Per Minute or to suit many other applications.

HERMAN H. STICHT CO., INC.
Tachometer Headquarters
27 PARK PLACE NEW YORK 7, N. Y.

▲ Mention Item NED-6379 when writing ▲

Here's an actual case history that speaks for itself:

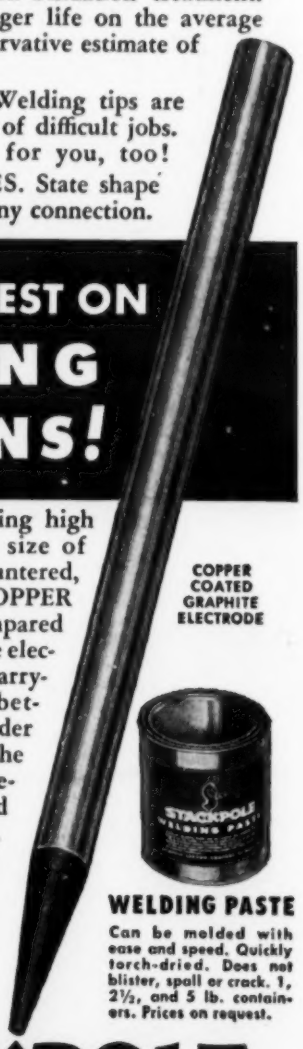
"On a typical high temperature job where ordinary brazing carbon electrodes were changed hourly, Stackpole electrodes lasted all day."

Of course there must be a reason for outstanding performance like this—these Stackpole tips were processed with the famous Stackpole "F" Anti-Oxidation treatment. Three to four times longer life on the average job is an extremely conservative estimate of the savings involved.

Stackpole Brazing and Welding tips are saving money on dozens of difficult jobs. They can save money for you, too! WRITE FOR SAMPLES. State shape and size. Mention company connection.

MAKE THIS TEST ON WELDING CARBONS!

When operations requiring high current values for the size of the electrode are encountered, try the new Stackpole COPPER COATED rods! As compared with uncoated types, these electrodes increase current carrying capacity, provide better contact between holder and electrode, reduce the amount of tapering required, last longer, and produce better welds. Write for samples today. Test them in your actual production operations.



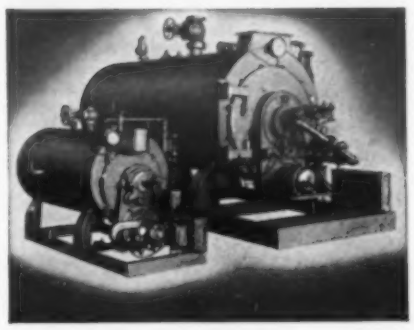
WELDING PASTE
Can be molded with ease and speed. Quickly torch-dried. Does not blister, spall or crack. 1, 2½, and 5 lb. containers. Prices on request.

STACKPOLE CARBON COMPANY
ST. MARYS, PA.

STACKPOLE
EVERYTHING IN CARBON BUT DIAMONDS

▲ Mention Item NED-6380 when writing ▲

STEAM GENERATORS
oil or gas fired with same nozzle



These Cyclotherm boilers employ high atomizing burner nozzles which incorporate primary air supply to assure precise injection of fuel and air for efficient combustion at all firing rates. Nozzle design permits interchangeable oil or gas firing without change of nozzle. Other features include simplified air supply system, improved and ignition programming controls and blower-air channel design that achieves quiet operation. Generators can be obtained in sizes ranging from 10 to 300 hp and for pressures from 15 to 200 psi. Made by **Cyclotherm Corp.**, Dept. 132-R, 90 Broad St., New York 4, N. Y.

▲ Mention Item NED-6381 when writing ▲

PHOTOELECTRIC COUNTER
adaptable to remote indication

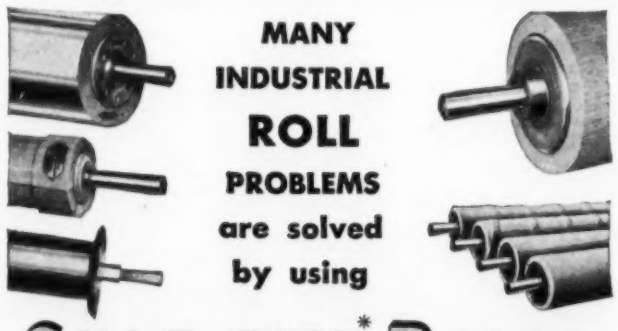
Operating at speeds up to 600 counts per minute, P-1 general purpose photoelectric counter set is designed particularly for counting production moving along conveyor systems or feeding from automatic machines. Consisting of photoelectric control, light source and electric counter, equipment adapts itself to multiple and remote indication. Control has line cord with male plug connection which fits any standard lighting outlet. This supplies power for light source and counter, which in turn have cables and plugs for connection to control. Light source has adjustable lens system which permits narrowing light beam for counting very small objects. Operating range is 6 ft between photo-electric units and light source. Special light sources are available for longer range. Made by **Photoswitch Inc.**, 77-89 Broadway, Cambridge 42, Mass.

▲ Mention Item NED-6382 when writing ▲

DO YOU KNOW?

■ METALLIC paste-type alloys used in brazing and soldering can be applied to work in any desired pattern by Auto Transfer method which is outgrowth of the silk screen printing process. Stencil in required pattern for work is cut so that necessary amount of paste can be applied. Soldering or brazing then proceeds in usual manner. Developed by Fusion Engineering, 4504 Superior Ave., Cleveland 13, O.

▲ Mention Item NED-6383 when writing ▲



MANY INDUSTRIAL ROLL PROBLEMS are solved by using

SHAF-TITE* ROLLS

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48
Most complete publication of its kind

Industrial Roll Division
RODNEY HUNT MACHINE CO.
73 Maple Street, Orange, Mass.

* Reg. U.S. Pat. Off.

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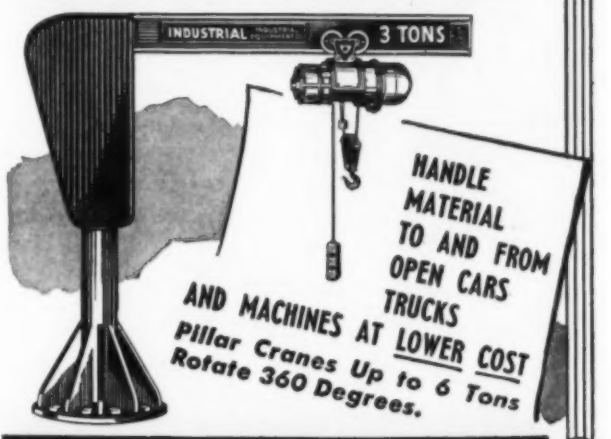
Industrial CRANES
Improve Your Profit!



INDUSTRIAL EQUIPMENT CO.
327 NORTH ADA STREET CHICAGO 7, ILLINOIS
Write for Catalog. Representatives in Principal Cities.

▲ Mention Item NED-6385 when writing ▲

TOTES MORE PAYLOAD at LESS COST . . .

LIGHT WEIGHT—Convoy Nesting Tote Box—weighs 50% to 60% less than steel . . . 2 cu. ft. size weighs only 7.2 lbs.

STRONG, DURABLE—Convoy Tote Boxes are made of chemically hardened corrugated board by an exclusive impregnation process . . . generally will support anything they will contain. Many of them have been in active daily use for more than two years. Armored rim for rigidity . . . strong, comfortable handholes.

LOW COST—Convoy Nesting Tote Box costs 50% to 60% less than steel . . . so inexpensive that they can be discarded when they finally become unserviceable.

More than 12 stock sizes of nesting boxes available now . . . write for details.

Dept. N
CONVOY, INC. CANTON 7, OHIO

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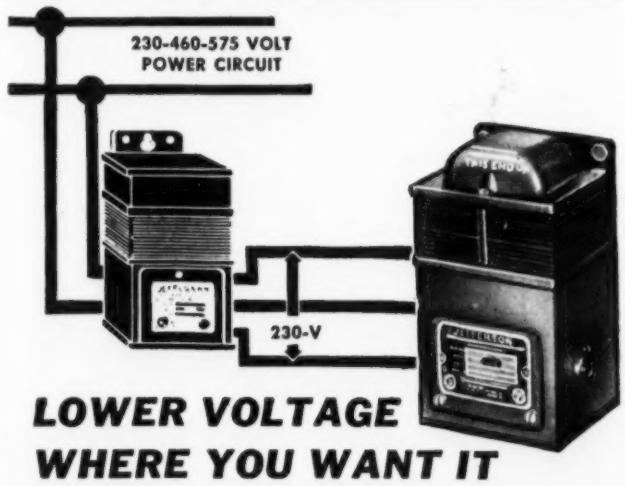


LOWER VOLTAGE WHERE YOU WANT IT

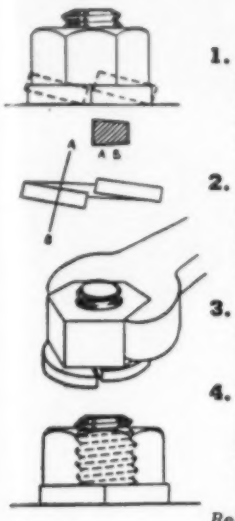
It is a present day practice to distribute high voltages (usually 460V) and use transformers to supply the lower voltage for lighting, control and relay circuits. This system effects worthwhile savings in copper, conduit and man hours.

Suggestions on selection and installation are contained in Bulletin 461-PCT. A copy is yours for the asking. Jefferson Electric Power Circuit Transformers are available from stock in capacities from .050 to 15 KVA, inclusive. Approved and listed by Underwriters' Laboratories, Inc.

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois
In Canada: *Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.*

▲ Mention Item NED-6387 when writing ▲

Why RELIANCE SPRING LOCK WASHERS provide superior, dependable and enduring bolt tightness



1. **Helical Design Coil** automatically and mechanically develops maximum reactive range to compensate for looseness as a result of wear—keeps bolted assemblies tighter longer.
2. **Made of Cold Drawn Spring Steel** of special section design as required by A.S.A. Specifications. Provides desired tension for maximum reactive pressure and fatigue resistance.
3. **As a Hardened Thrust Bearing** it provides greater tightening torque without setting up surface resistance.
4. **Provides a full bearing for nut, screw** or bolt. When compressed the Spring Lock Washer maintains tightening friction in all threads but does not damage threads.

Reliance Spring Lock Washers offer many important advantages. Write for folder.

EATON MANUFACTURING CO., RELIANCE DIVISION
MASSILLON, OHIO
New York, Cleveland, Detroit, Chicago, St. Louis, San Francisco, Montreal

▲ Mention Item NED-6389 when writing ▲

JUST PRINTED

Two bulletins showing how *NEW G-E MOTOR EXCHANGE PLAN* cuts machine down time

Get the story of the new time and money saving General Electric exchange plan for Tri-Clad integral-hp motors! It's an extension of the highly successful G-E fractional-hp motor exchange plan and covers most popular types of Tri-Clad open dripproof motors—one to five hp. Bulletin GEA-5189 is for motor users; Bulletin GEA-5180 is for machinery manufacturers. Write on your letterhead FOR FREE COPY: *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

Look for this extra on the motors you buy; it means lower maintenance costs, less time lost for motor replacement.

PROTECTED — MOTOR EXCHANGE PLAN

GENERAL ELECTRIC
756-3J

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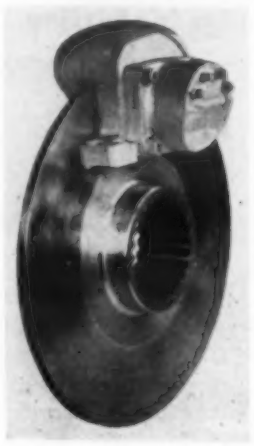
SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

▲ Mention Item NED-6391 when writing ▲

INDUSTRIAL DISK BRAKE acts smoothly on heavy machines



Adaptable to shuttle cars, continuous miners, loading machines and timber setters, this nonself-energizing brake overcomes quick-grabbing action of conventional types. It has straight line torque curve throughout braking range and gives equal torque in both directions. Disk is easy to reline or replace and is self-adjusting over entire life of lining. Self-adjusting feature assures uniform pedal stroke at all times for smooth operation and maximum safety. Made by **Goodyear Tire & Rubber Co.**, 1144 E. Market St., Akron 16, O.

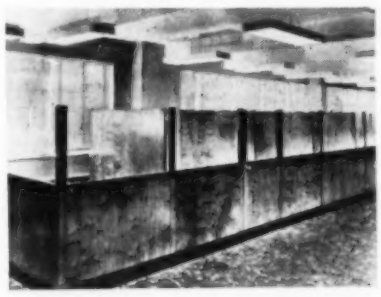
▲ Mention Item NED-6392 when writing ▲

CARBIDE BORING TOOL round nose allows boring large holes

By plunging and feeding both ways, style 16T round nose tool is particularly suitable for boring in trough. Tool is available in two sizes: 1 x 1¼ x 12 in. and 1 x 1½ x 12 in. Brazed-on Kennametal tip of each size has ¼-in. radius at extreme point, blending into 1½-in. radius at each side. Tips are supplied in either grade K6 or grade K2S. Made by **Kennametal Inc.**, 171 Lloyd Ave., Latrobe, Pa.

▲ Mention Item NED-6393 when writing ▲

MOVABLE OFFICE PARTITION easily erected panel is fire-proof



Available in wide variety of hardwood faces, USP partition panels are 1-in. and 1¾-in. thick in sizes ranging from 18 x 34 in. to 34 x 144 in. They can be used in various combinations, and 7-ft heights can be erected easily with or without glass openings. When extended to ceiling, partitions afford satisfactorily soundproof rooms. Panels are interlocked by tongue and groove at vertical joints. For existing walls, panel of 1-in. thickness is available in matching wood to make completely paneled room.

Partition has core of incombustible insulating material and beautifully grained hardwood veneer faces. It can be worked with ordinary hand or power woodworking tools. Partitions can be demounted readily and re-erected for change in office arrangement. Made by **United States Plywood Corp.**, 55 W. 44th St., New York 18, N. Y.

▲ Mention Item NED-6394 when writing ▲

Removable Starter-Strip releases end of Labels for you to peel!

PULL BACK HERE TO SEPARATE THIS STARTER-STRIP

FREE SAMPLES

W. H. BRADY CO., 16 E. SPRING ST., CHIPPEWA

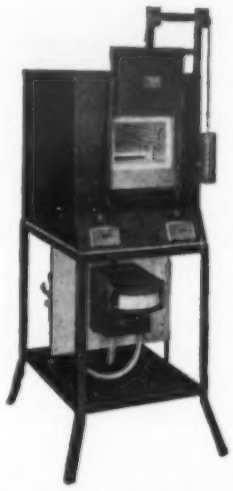
Brady QUIK-LABELS *mark your wires faster!*

QUIK-LABELS code wires, leads, circuits, relays, parts, etc. faster and at lowest buy-and-apply cost. • Pre-cut to exact size, QUIK-LABELS come on handy cards, stick without moistening. • Replace slow and costly string tags, roll tapes, decals, metal tags, etc. • Silicone plastic coated to resist dirt, grease, moisture and abrasion. • Exclusive Starter-Strip automatically releases any or all labels; it is faster, safer, snag-proof. • Over 1000 NEMA and ASA markings and colors in stock. • Maintenance men carry cards to the job. • QUIK-LABEL Dispenser holds cards for production operators and leaves both hands free for faster work. • QUIK-LABELS are sold by distributors in over 125 principal cities of U. S. A. and Canada. ***Write for Useful Literature and FREE Sample Cards.***

W. H. BRADY COMPANY
Identification Specialists
Established 1914
238 W. Wells St., Milwaukee 3, Wis.

▲ Mention Item NED-6395 when writing ▲

√ *Utmost Accuracy to 2300° F*
√ *Built for Heavy Duty*



Model 12 also available as table model. 0-1000° F. and 1000° to 2000° F., complete with automatic control—$420.00.

Complete data is ready for mailing—Write

HUPPERT MODEL 12HTFM FURNACE

The sturdy, all-steel construction of this Huppert Furnace assures years of dependable, heavy duty and maintenance-free, continuous operation. Its multi-insulation is the secret of low current consumption and ability to maintain accurate temperatures so easily. The Huppert 12HTFM is ideal for both laboratory and small batch or unit production. Equipped with Kanthal elements; fully enclosed contacts; easy-operating, tightly closing, counter-weighted, wedge-type door and removable porcelain tray. 220 V-AC with max. load 6 KW and min. 3 KW. I.D. 8" x 8" x 12" (2½" throat additional). O.D. 22" x 28" x 68".

Complete with Huppert Temperature Control and stand—

$575.00.

K. H. HUPPERT CO.
6838 COTTAGE GROVE AVENUE
CHICAGO 37, ILLINOIS

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STEEL or BRONZE BACK

BABBITT LINED BEARINGS

Babbitt-lined bearings are ideal for a wide variety of applications. They are "tailor made" in the sense that you have two types of babbitt for the lining . . . lead or tin base . . . and either bronze or steel for the backing.

We can help you make the right selection. Simply tell us what you expect of the bearing.

We will give you the right answer, based on facts, and deliver your requirements . . . on time . . . made to precise specifications . . . and guaranteed to be top quality in every respect.

Write today.

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
580 SOUTH MILL STREET • NEW CASTLE, PA.

▲ Mention Item NED-6397 when writing ▲

BIN-LEVEL CONTROLS

2 BIN-DICATORS Often Replace 1 Man

BIN-FLO Aerating Units Keep Things Moving

ECONOMICAL MATERIAL CONTROL

DEPENDABLE BIN-LEVEL INDICATION

Mail this Coupon

THE BIN-DICATOR CO., 13946 Kercheval, Detroit 15, Mich.

Please send new 20-page catalog giving complete information and specifications on BIN-DICATORS. Also please send information on BIN-FLO Aerating Units. D-9

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Address_____

City_____ Zone____ State____

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Gears that last longer, cut replacement costs

—a "common-sense and dollars" reason for making gears from Ampco Bronze.

Whether you are designing a new gear or rebuilding old equipment, play safe by selecting the Ampco alloy and form that fit your needs. Get a gear that stands up under impact and fatigue with unbelievable resistance to wear—that outlasts any gear on the same job. Ask your nearest Ampco Field Engineer for recommendations and assistance.

SAND-CAST AMPCO METAL—Massive 2416-lb. worm gear which plays a critical part in the "screw-down" mechanism of a giant-size rolling mill.

CENTRIFUGAL CASTING (including teeth) — Used as a boom hoist gear on large excavating shovel. Withstands wear, fatigue, shock, and abrasion caused by dust, dirt, and loading.

EXTRUDED AMPCO METAL — Tiny drive-gears and level-wind gears for a fishing reel; designed to give perfect performance and service under widely varied conditions.

WELDED ASSEMBLY — An Ampco centrifugally-cast ring welded to a mild steel hub and web with Ampco-Trode 10 electrodes. For top performance at minimum cost.

CONTINUOUS-CAST AMPCOLOY*— Bronze rim with die cast aluminum hub and web. This eccentric gear is proving its value in many automatic home washers.

*Produced by American Smelting & Refining Co. under a patented process.

Write for Free Copy of Bulletin 95.

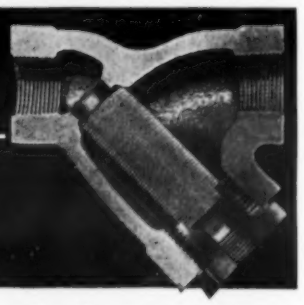
AMPCO®

Ampco Metal, Inc.

Dept. NE-9, Milwaukee 4, Wisconsin
West of the Rockies it's the Ampco Burbank Plant Burbank, Calif.

Mention Item NED-6399 when writing

It says "STOP" to Solids— "GO" to Fluids



Here is a BETTER Strainer to "police your pipelines"

- FIRST—*The Screen*, a high-grade, woven Monel wire basket that catches solids—lets condensate, oil or other fluids flow freely.
- SECOND—*Finish*. Cadmium plated for protection against corrosion and for better appearance.
- THIRD—*Easily Cleaned*. Blow-off bushing made for easy removal. Bushing and Screen come out together. Screen automatically aligns on reassembly.
- THOUSANDS IN SERVICE—Sold by over 150 Mill Supply Houses. 6 sizes from ½" to 2" for pressures up to 600 lb. Reasonably priced.

See your supply house or write for Bulletin S-201.

YARNALL-WARING COMPANY
131 Mermaid Ave., PHILADELPHIA 18, PA.

YARWAY STRAINERS

Mention Item NED-6400 when writing

GRIND DOWN PRODUCTION COSTS WITH CLECO PNEUMATIC GRINDERS

- Many sizes and styles for every grinding and polishing job.
- Governor controls speed—reducing air consumption and assuring efficient operation.
- One-piece rotor, wide impeller blades, heavy duty bearings and rugged construction assure long trouble-free service.

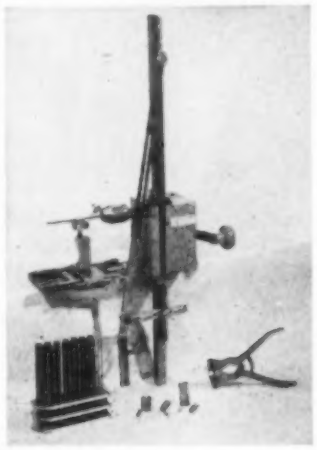
Call Your Cleco Man for:

Grinders - Sanders - Rotary Drills
Riveters - Sand Rammers - Scaling Tools
Chippers - Impact Wrenches - Screwdrivers
Hose Fittings - Sump Pumps

CLECO DIVISION
of the REED ROLLER BIT COMPANY
P. O. Box 2119, Houston, Texas, U. S. A.

Mention Item NED-6401 when writing

SPRING COILING MACHINE is semiautomatic for coiling small lots and making samples for testing

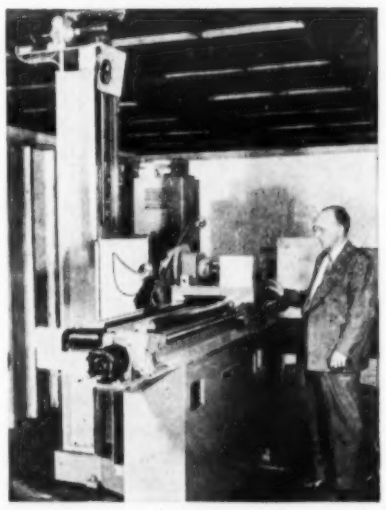


Usable for winding both left-hand and right-hand compression, extension and torsion springs, this No. 1 Spring Coiler can wind springs from stainless or spring steel, music wire, phosphor bronze or any other suitable material. It requires only few minutes setup time, and operator can complete 25 to 35 small-lot orders per day. It is equipped with arbor rack which contains 29 arbors made from ground and polished drill rods in diameters from 1/16 to ½-in. in steps of 1/64-in. Three coiling points, extra wire holder for heavy wire and wire cutter are included also.

Machine will handle wire diameters up to 0.063-in. and will coil springs up to ¾-in. in diameter; however, larger outside diameters are obtainable with special arbors. Springs up to 4-in. overall length and up to 25 coils can be produced with pitches varying from zero up. End coils of compression springs are closed or squared automatically, and they are wound with uniform pitch to exact length. Machine is hand operated, but motorized unit can be added if desired. Made by **Carlson Co.**, 275 Broadway, New York 7, N. Y.

Mention Item NED-6402 when writing

CONTOUR CONTROL electronic system employs electric eye to guide machine cutting tool



Capable of machining irregularly shaped metal parts which are difficult to make by normal hand-controlled machining methods, this contour following system is applicable to fields where small quantities of relatively expensive pieces must be produced to close tolerances. Instrument utilizes electric eye which follows lines of drawing and controls lead screws of cutting tool by emitting signals to electronic servo system.

Equipment is capable of following line in form of closed loop with diameter as small as 0.06-in. It scans line of drawing through low-power microscope at speed of 0 to 6 in. per minute and does not deviate from drawn line by more than 0.003-in. Set of change gears provides range of reduction ratios between drawing and finished part from 3.75:1 to 60:1, reducing error in finished piece to less than 0.001-in. Made by **General Electric Co.**, Schenectady 5, N. Y.

Mention Item NED-6403 when writing

SAFETY SWITCH protects hoists and cranes from accidental overloads

Designed to prevent injury to workers and equipment resulting from broken hoist cable or chain, improved Dyna-Switch can be set to cut off motor at any load between 500 and 10,000 lb. It slips onto hoist or crane hook, and load is lifted directly beneath it in usual fashion. U-shaped tool steel bar of switch opens and closes circuit of Micro-Switch as loads are lifted. Normally circuit is closed when loads are being lifted. If hoist capacity is exceeded, circuit automatically opens to cut out motor and thereby prevent operator from making lift. Circuit remains open until operator presses switch to reverse, and excess load must be removed before hoist will operate. Hoist motors up to ¾-hp can be controlled directly by switch, while higher capacities are handled through intermediate relay. Made by **W. C. Dillon & Co.**, Dept. NED, 5410 W. Harrison St., Chicago 44, Ill.

Mention Item NED-6404 when writing

You know how tight with APCO TENSION DRIVER

$5.95

No. B-25. 0-25 inch pound. Length 12". Weight ¾-lb. Non-slip, non-chip, non-conductor handle.

- HERE'S THE DRIVER you've been waiting for . . . a rugged, fool-proof, ratchet-free torque tool that'll save you many an hour on scores of different assembly jobs. Broken screw days are over when you use APCO.

Just check the safe load on the free chart supplied with every driver and go to work. Four big, easy-to-read brass dials let you see the exact torque from *any* position.

Every driver supplied with three fine tool steel heads to adapt the driver instantly to slotted, Phillips or ¼" socket drives.

Send for descriptive circular today . . . or better still, order one and see for yourself now the easy way this *new* APCO TENSION DRIVER saves you time, material and accidents.

APCO MOSSBERG CO.
161 Lamb Street
ATTLEBORO, MASS., U. S. A.

Mention Item NED-6405 when writing

FABRICATED SCREENS STRAINERS

TO YOUR SPECIFICATIONS

- PRODUCTION RUNS
- HIGH QUALITY

NEWARK offers a "complete package" service in the design and manufacture of fabricated woven wire parts. We design and manufacture screens and strainers for all types of service; for handling oil, water, gasoline, air, corrosive gas or steam.

We manufacture the wire cloth, thus insuring its accuracy; we also do all the necessary cutting, forming, soldering, stamping, punching, welding and seaming. In other words, it's a NEWARK job from start to finish.

Newark Wire Cloth COMPANY
332 Verona Avenue • Newark 4, New Jersey

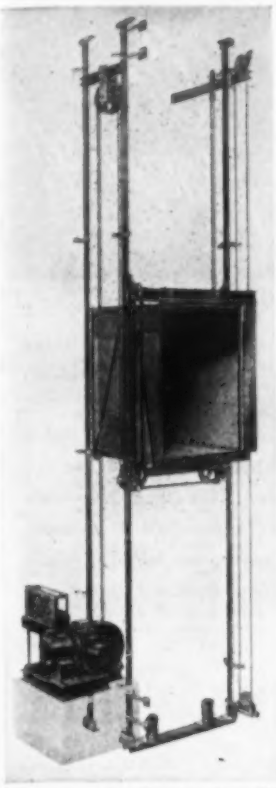
NEWARK for ACCURACY

9-NWC-3

Mention Item NED-6406 when writing

New Electric Freight Elevator is Self-Supporting

Inexpensive to Install

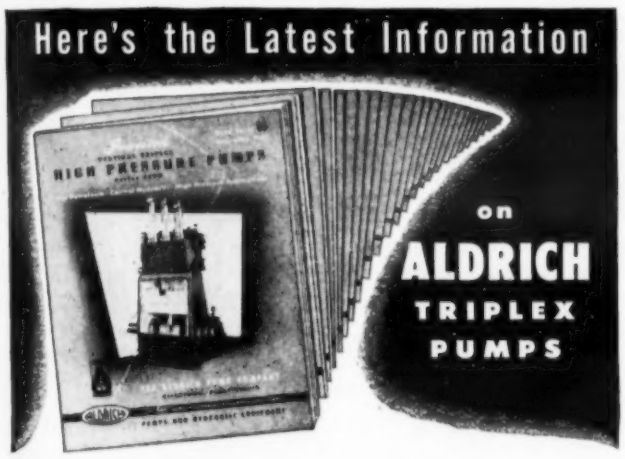


A new self-supporting elevator has been designed to provide a low-cost, electric elevator installation for every type of business and institution that requires vertical freight transportation, but does not need heavy-duty freight elevators. It fills a long-felt need by making materials handling considerably easier and less costly for small business. The elevator is being made in three standard sizes of 1,500, 2,000 and 2,500 pounds capacity. Vertical rise is limited to 35 feet—sufficient for a three story building.

As illustrated, the elevator is installed as a complete unit in a new or existing hoistway. Only 11 feet of headroom is needed above the top floor landing. Expensive construction, such as a penthouse on top of the building for the electric motors and other operating machinery, overhead supports, roof alteration and building reinforcement, is eliminated. As the elevator supports itself, no heavy strain is placed on the building. The weight of car, load, hoist ropes and sheaves is carried by three guide rails in the hoistway and transferred to the bottom of the shaft. The elevator can be operated by any employee without special training. For complete details, write for Bulletin B-720X. Address: Otis Elevator Company, 260 11th Avenue, New York 1, N. Y.

▲ Mention Item **NED-6407** when writing ▲

Here's the Latest Information



It pays to keep up-to-date on the latest developments in high pressure pumps—and here's an excellent way to do it. Just write for your copy of new Aldrich Data Sheet 66.

It completely pictures and describes the Aldrich Inverted Vertical Triplex Pump—gives standard ratings, approximate dimensions and diagrams of comparative discharge flows. The Data Sheet describes the construction and operation of the pump and points out its low maintenance features. Cross-section drawings and various charts illustrate primary advantages.

You can get your free copy, now. Just write to—

THE ALDRICH PUMP COMPANY
4 Gordon Street • Allentown, Pa.

ALDRICH THE *First* NAME IN INVERTED RECIPROCATING PUMPS

▲ Mention Item **NED-6408** when writing ▲

There's No Profit in DOWN TIME

Today, TIME is priceless. With markets literally begging for goods, all-out production is the order of the day.

SO make every machine work harder and produce more. How? Well, the first step is to find out if any precious time is now being wasted by machines *standing idle* at odd moments. And the way to do *that* is to clamp a little SERVIS RECORDER on each one. Then you'll get the whole story—then you can SEE, by its chart, whether each machine keeps busy every minute — day shift — night shift — 24 hours. Write for our folder—"A Busy Plant." The Service Recorder Co., 1375 Euclid Ave., Cleveland 15, Ohio.

The Servis Recorder
The "Time Clock" for Machinery

▲ Mention Item **NED-6409** when writing ▲

MOTORIZED WORK CENTERS

sets up work accurate to 0.0005-in. for grinding and other operations

Flat, curved or circular work; straight, taper and contour outlines; simple or in any combination can be set up for grinding with motorized work centers. Also, tool provides for indexing in same setting. In addition to surface grinders, it can be used on jig borers, jig grinders, drill presses and light milling machines and as inspection tool.

Attachment consists of rocking bed which swings 20 degrees to either side of horizontal. When it is used with angle plate, maximum taper angle becomes 30 degrees. Dovetailed base plate permits sliding headstock and tailstock to position. Headstock is equipped with live center and index plate with 24 holes, jig drilled to tolerance within 0.001-in. for spacing.

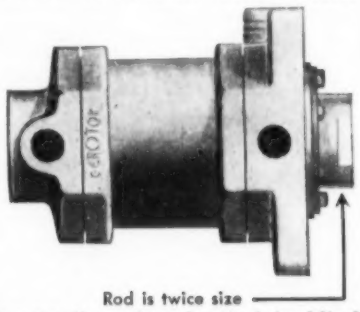
Unit has 6-in. distance between centers and 6-in. swing, and is driven by 1/25-hp motor. In operation, all steps can be accomplished with same set-up, since tapers can be reversed or changed by loosening two screws in rocking bed and indexing plate can be engaged by merely pressing plunger. Made by **Moore Special Tool Co.,** 740 Union Ave., Bridgeport 7, Conn.

▲ Mention Item **NED-6410** when writing ▲

CUSHION CYLINDER

compresses displaced air or fluid to reduce impact of piston stroke

Having 150-psi air and 300-psi oil pressure capacities, series 100 cylinders are improved by addition of cushion units. Cushion plate attached to cylinder cover blocks off flow of exhaust air or fluid when cushion bushing attached to piston rod enters this mating cushion plate. Air or fluid displaced by movement of piston is thus compressed and metered out through adjustable needle valves, thereby cushioning piston during remainder of stroke. One needle valve, located in blind end cover, controls speed of cushioning stroke when piston rod is retracting. Other needle valve, located in rod end cover, controls speed of cushioning stroke when piston rod is extending. Two check valves built into cushion plates permit unrestricted flow of pressure into cylinder.



Cylinders are supplied with cushioning on both ends of cylinder or on either end. Bore sizes in which cushioning strokes can be obtained are 1½, 2, 2½, 3, 4½, 6, 8, 10 and 12 in. Each size is available in rabbet, foot, trunnion, center line, blind end flange, rod end flange and clevis mountings. Made by **Gerotor May Corp.,** Dept. K, P.O. Box 86, Baltimore 3, Md.

▲ Mention Item **NED-6411** when writing ▲

Saginaw

SAGINAW PRODUCTS CORP.
106 River St., Saginaw, Mich.

▲ Mention Item **NED-6412** when writing ▲

YOU CAN BE SURE.. IF IT'S Westinghouse

Bring high-voltage power close to the center of utilization with Westinghouse Dry-Type Transformers. Can be easily installed anywhere—on posts, shelves, walls, platforms. No need for fireproof vaults.
J-70542

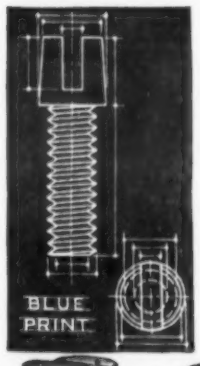
- Lower Power Costs
- Lower Operating Costs
- Lower Maintenance Costs

SEND FOR **FREE** LITERATURE

Write for FREE descriptive literature, B-4009. Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Penna.

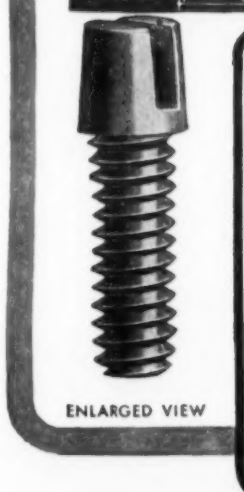
Westinghouse
DRY TYPE TRANSFORMERS

▲ Mention Item **NED-6413** when writing ▲



IF IT'S SPECIAL SEE PROGRESSIVE

QUALITY PROMCO BRAND



KEEP YOUR COSTS DOWN

Progressive specializes in manufacturing special heads, threads and finishes on any metal or alloy adapted to cold upset. Please write for catalog showing many Progressive specials. Catalog includes purchasing and engineering helps.

The **PROGRESSIVE MANUFACTURING CO.**
46 NORWOOD ST.
TORRINGTON, CONNECTICUT

▲ Mention Item **NED-6414** when writing ▲

for EVERY KIND of HOSE CONNECTION
Use *"Aero-Seal"*®
WORM-DRIVE SUPER HOSE CLAMPS

★ **WORM DRIVE** holds fast—vibration proof.
★ **INSTALLS FAST**—self-feeding take-up.
★ **UNIFORM** clamping pressure around full 360°.
★ **ONE PIECE,** nothing to drop or lose.
★ **USE OVER** and over, rust resistant or stainless steel.

FREE Sample Clamp

Please send free sample without obligation.
Name
Company
Address
City

BREEZE CORPORATIONS, INC.
AIRCRAFT STANDARD PARTS CO. DIVISION
37 South Sixth Street, Newark 7, N. J.
ANOTHER BREEZE MARK PRODUCT

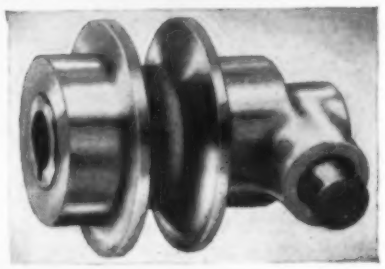
▲ Mention Item **NED-6415** when writing ▲

New! CONGRESS V-Belt Clutch

IMMEDIATE DELIVERY
2½" "A" O.D. ½", ⅝", ¾", Bores

•

2½" "B" and 3", 3½" & 4" Sizes for "A" & "B" Belt to follow



POSITIVE ACTION:

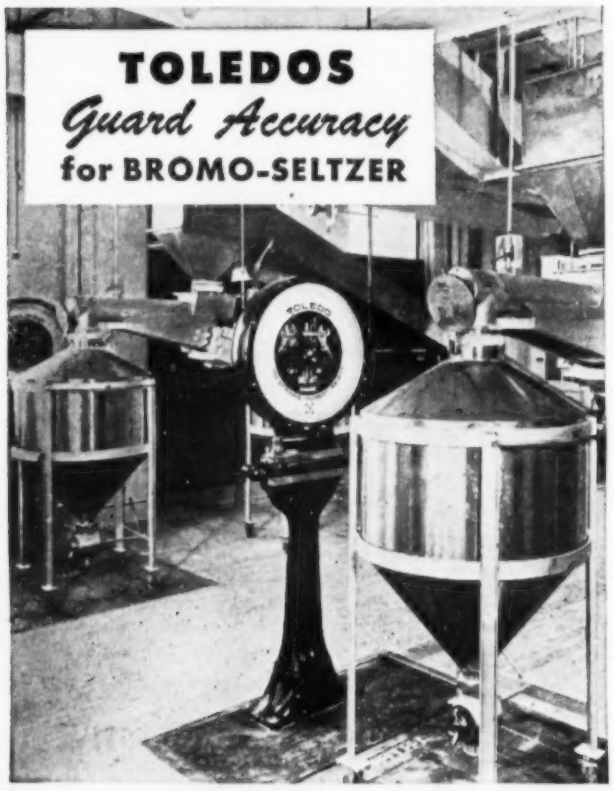
The Congress clutch is positive, easy on the machine, absorbs shocks, trouble free, does not wear out the belt; simple as a light switch to operate—and priced low enough to be used on power lawn mowers, garden tractors, in home work shops and thousands of other applications.

Recommended for use on all gasoline engines and especially ideal for use with electric motors where it is desirable to start under no-load.

Write For Specifications and Prices

CONGRESS DIAMOND BORED DRIVES
3750 E. OUTER DRIVE, DETROIT 34, MICH.

▲ Mention Item NED-6416 when writing ▲



Accurate batching . . . automatically controlled by Toledo Scales . . . helps to maintain unvarying quality in production of Bromo-Seltzer at the Emerson Drug Company, Baltimore, Md.

Shown here is part of the efficient production system of this plant. The dry, granular processed salt is fed to the bins by a belt operating in a stainless steel housing. The material is weighed into the portable hoppers shown on the scale platforms . . . with Toledo automatic controls cutting off the filling operation at precisely the desired weight.

Control your costs and quality with TOLEDO all the way . . . in weighing, counting, force-measuring, batching or testing. Send for new bulletin No. 2020. Toledo Scale Company, Toledo 12, Ohio.

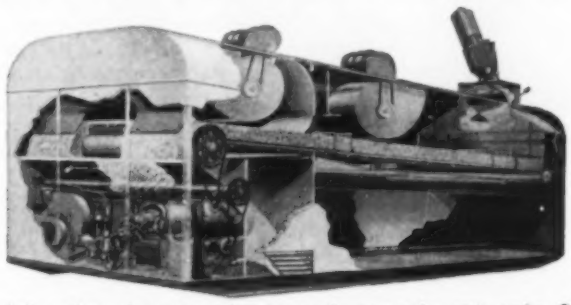
Toledo Service as near as your telephone...with factory-trained service men in more than 200 cities of United States and Canada.

TOLEDO
HEADQUARTERS FOR SCALES

▲ Mention Item NED-6417 when writing ▲

CONVEYOR BELT DRYER
heats and cools industrial products

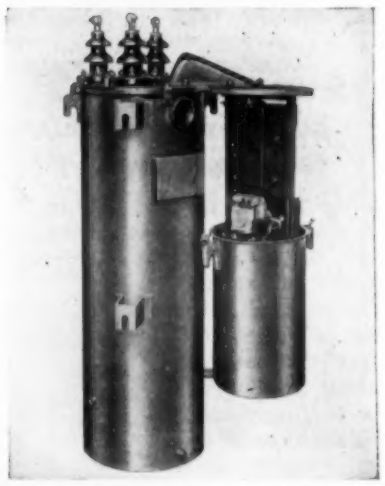
Operating on horizontal conveyor belt principle, this self-contained portable Arid-Aire dryer is recommended for drying wood products, cork, grain and casein. Wet material enters hopper at one end, spreads out onto 8-ft heavy-duty wire mesh belt, passes at variable speed through drying chamber, through cooling area and discharges at opposite end. Oil, gas or steam can be used to generate heat up to 300° F with automatic temperature control. Unit weighs 13,200 lb and measures 25 x 8½ x 8½ ft overall. Made by **Arid-Aire Mfg. Co.,** 420 Second Ave. S., Minneapolis 1, Minn.



▲ Mention Item NED-6418 when writing ▲

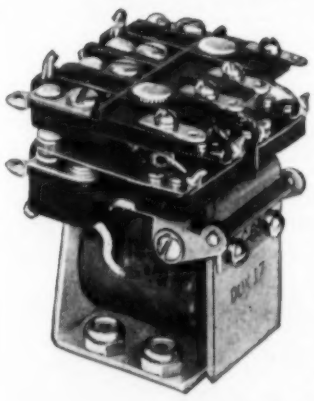
VOLTAGE REGULATOR
adaptable to small feeder lines

Pole type JFR voltage regulator offers precise ⅝-per cent step voltage control, and low cost permits regulation in fringe areas where formerly use of booster was only economically feasible method of voltage adjustment. Unit has plus and minus 10 per cent regulation and is completely self-contained with automatic control and line drop compensation. At present it is available for 10.8-kva 7200-v 15-amp service. Made by **Allis-Chalmers Mfg. Co.,** Dept. 1121, 6900 Norman St., Milwaukee 1, Wis.



▲ Mention Item NED-6419 when writing ▲

POWER RELAY
nominally rated 10 amp at 115-v ac

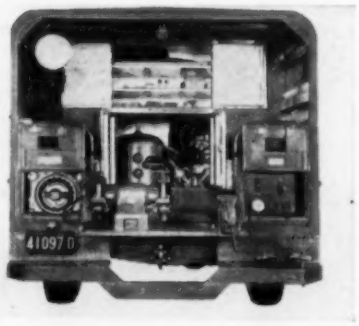


Suitable for exacting control requirements, type DO Amrecon power relay is available in contact combinations up to 4-pole double-throw. Sealed coil construction affords resistance to humidity and moisture. Coils are available for continuous duty at ratings up to 230-v ac or 115-v dc. Size of illustrated model is 2¼ x 2-1/16 x 1⅞ in. Made by **American Relay & Controls, Inc.,** 4841 Flournoy St., Chicago 44, Ill.

▲ Mention Item NED-6420 when writing ▲

FIELD SERVICE TRUCK
incorporates power-driven machines

All equipment needed for servicing military, mining, construction, oil field, utility and other machinery operating over large areas and distant from service centers is mounted on this type PW-308 four-wheel drive truck. Principal equipment includes 300 - amp welder, 8-kw a-c generator, Little Workhorse air compressor, oxy-acetylene welding, cutting and brazing outfit, 8-in. bench grinder, portable arbor press, floodlights, 7500-lb winch and complete complement of service and portable electric tools. Waterproof steel body provides space for driver and six passengers and is fitted with tool boxes and storage bins. Welder and compressor are direct-driven by truck engine through heavy duty power take-off. Made by **Davey Compressor Co.,** Power Take-off Div., Kent, O.



▲ Mention Item NED-6421 when writing ▲

THERMOLIER UNIT HEATERS

While last January's cold spots in your plant are still vividly in mind act now to eliminate them next winter.

Get in touch with Grinnell or your local Thermolier Distributor. Let us show you how Thermolier Unit Heaters put heat where you want it more efficiently and at substantial fuel savings.

Thermolier's 12 points of superiority make it the first choice for efficient, trouble-free operation. Thermolier Catalog 6-E tells the whole story. Send for a copy.

GRINNELL COMPANY, INC.
Providence 1, R. I.
Branches in principal cities.

GRINNELL
WHEREVER PIPING IS INVOLVED

▲ Mention Item NED-6422 when writing ▲

This odd looking THOMAS truck is one of Handiest Made

Moves tremendous loads easier, faster, safer

THOMAS PRY TRUCK

You will be surprised at the amount of heavy cases, crates, die blocks or any kind of big loads two men can move, shift or store with Thomas Pry Trucks. Even with only one man the work production is amazing, although purchase in pairs is recommended.

The sharp steel nose slides under the load and the tremendous leverage enables the user to raise the load easily as high as 9" from the floor. Two or more Pry Trucks can be used to move loads, or by raising the load, rollers or dollies can be placed under it. Loads can be moved in and out of freight cars or motor trucks and shifted in and out of tight places. Write for catalog PT.

One of many Thomas 2 and 4 Wheel Trucks. Reps. in principal cities.

THOMAS
TRUCK & CASTER CO.
556 Mississippi River
Keokuk, Iowa

▲ Mention Item NED-6423 when writing ▲

Oil Resistant Rubber Parts

• Featuring LONG LIFE and MINIMUM SWELL, gaskets, sleeves, washers, tubing, and extruded cross-sections now are available fabricated from new oil and gasoline—resistant rubber compounds. These compounds have been developed especially to resist the chemical action of petroleum products and their derivatives as well as industrial and commercial lubricants.

The new compounds can be fabricated into precision parts intended for such applications as fuel lines, dust covers, filters, vibration dampeners, etc.

STALWART Custom-Fabricated oil and gasoline—resistant rubber parts can be supplied to meet S.A.E. or individual specifications in the automotive, aviation, petroleum, electrical, chemical processing and many other industries.

WRITE FOR CATALOG

THE STALWART RUBBER CO.
9151 NORTHFIELD ROAD
BEDFORD, OHIO
CUSTOM RUBBER FABRICATORS

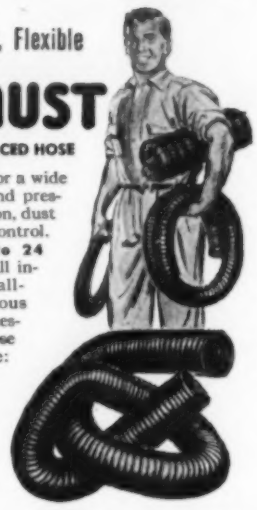
▲ Mention Item NED-6424 when writing ▲

FOR VENTILATION, FUME AND DUST CONTROL

Light, Strong, Flexible

FLEXAUST

SPIRAL-REINFORCED HOSE



Flexaust is suitable for a wide variety of suction and pressure uses in ventilation, dust collection and fume control. **SIZES 1¼ inches to 24 inches.** Write for full information on this all-purpose hose. Various Flexaust types, accessories, and other hose types also available:

BLOFLEX
Non-reinforced collapsible

PORTOVENT
Ring-reinforced retractable

AMERICAN VENTILATING HOSE COMPANY

Dept. N-9, 15 Park Row, New York 7, N. Y.
Branch Offices:
New Orleans, La., San Francisco, Calif., Washington, D. C.
Plants: Amesbury, Mass.

▲ Mention Item NED-6426 when writing ▲

THE

Easy-to-handle

GEARED PIPE THREADER

RIDGID No. 4P's handles take the struggle out of carrying and putting on pipe

● Even when you feel like a Tarzan you appreciate the sensible balanced loop handles that make the 4P easy to pick up, carry and work with. Mistake-proof workholder sets to size *before* you put it on pipe, one screw to tighten, no bushings. 4 sets of 5 high-speed steel chaser dies give clean accurate threads on 2½," 3," 3½" and 4" pipe. Ratchet handle furnished — RIDGID Universal Drive Shaft and Power Drive available for power-threading. For perfect threads easily, order the RIDGID 4P from your Supply House.

RIDGID
WORK-SAVER PIPE TOOLS

THE RIDGE TOOL CO. • ELYRIA, OHIO

▲ Mention Item NED-6427 when writing ▲

DRY MATERIALS FEEDER
maintains controlled rate of flow

Accurate feeding or proportioning of dry powdered or granular materials can be achieved easily with this series 380 Draver Micro - Master feeder. Usual double-acting ratchet drive mechanism has been replaced with continuous rotary motion, infinitely variable speed drive that has controlled speed range from 0 to maximum. Capacity is controlled by micrometer-type adjustment which is complete with dial indicator, and adjustments can be made easily while unit is in operation. Feeders can be installed in groups or batteries as percentage units in continuous mixing systems which can be engineered to have centralized control over starting and stopping operations to eliminate feed-backs. Made by **B. F. Gump Co.**, 411 S. Clinton St., Chicago 7, Ill.

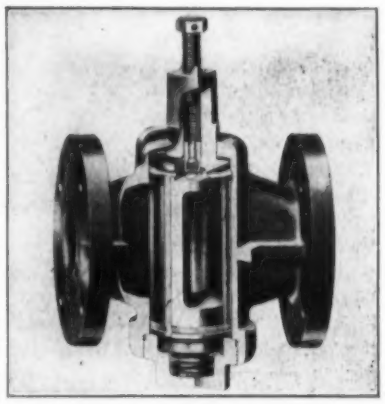
▲ Mention Item NED-6428 when writing ▲

CABLE CONNECTOR
for inside and outdoor circuit usage

Helical serrations on wire bearing surfaces increase gripping ability of this two-bolt connector so that clamp will hold strands of cable securely to maintain good connection. It is Underwriters' Laboratories approved for wire cable sizes from 1 to 1,000,000 circular mils. Compact and easy to tape, clamp exerts high pressure on cable and produces efficient low resistance joint. Made by **Jasper Blackburn Products Corp.**, First & Madison Sts., St. Louis 6, Mo.

▲ Mention Item NED-6429 when writing ▲

LUBRICATED PLUG VALVE
automatically compensates for wear



Cylindrical plug of Homestead - Reiser Self - Seald valve has wedge action which not only adjusts for wear but also keeps sealing surfaces of plug and body in intimate contact at all times to provide tight seal against leakage. Line fluid pressure also acts on plug to promote sealing effect. Other features include port areas equal to area of standard pipe, complete lubricant seal around ports and positive visible stops to limit operation to one-quarter turn. Made by **Homestead Valve Mfg. Co.**, P. O. Box 84, Coraopolis, Pa.

▲ Mention Item NED-6430 when writing ▲

Stanzoil NL-34

New Worker Comfort in This Elastic Knit-Lined Neoprene Glove

This Stanzoil Duplex NL-34 is designed expressly for, and is sold only to, industry. Elastic-knit lining stretches with every hand movement, gives new worker comfort and protection, more freedom than old-style flannel linings. Slip on and off easy as a cloth glove. Non-slip finish holds oily objects in a sure grip. Chocolate-brown DuPont Neoprene resists damage from oils, acids, caustics. Stanzoil NL-34's give you comfort and protection at lower cost per hour. Sizes small, medium and large. Larger Duplex Gloves, Catalog No. NL-42 and NL-52. Ask your supplier or write for informative catalog today.

Synthetic Rubber Division

The Pioneer Rubber Company
634 Tiffin Road Willard, Ohio, U. S. A.
Los Angeles, California

STANZOIL BY PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

▲ Mention Item NED-6431 when writing ▲

the case of the walking ducks

Occasionally engineering resourcefulness can spotlight an otherwise plain industrial product with a new and unusual use . . . such as the case of this Woven Wire Conveyor Belt installation in a duck brooder. » » » Newly hatched ducklings, it seems, have to be kept moving to be kept alive. Placed on this specially built woven wire belt, moving slowly, the ducklings remain there for eight days . . . continually treadmilling away from the falling end of the belt. Mortality rate dropped to zero! » » » Even if you don't operate a duck hatchery, call in a Cambridge engineer whenever you have a problem concerning the movement of materials or products during processing. » » » Let him explain the superior construction features of **CAMBRIDGE Woven Wire Conveyor Belts.**

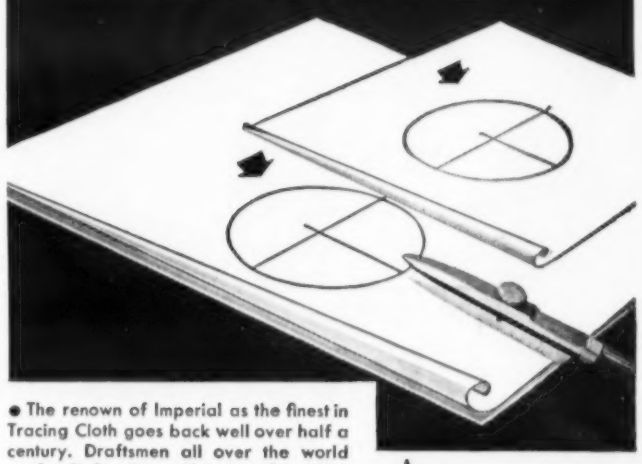
CAMBRIDGE WIRE CLOTH CO.
Dept. C • Cambridge 9, Md.

This illustrated 130 page catalog --FREE--to men concerned with production control. Write now.

BOSTON • NEW YORK • BALTIMORE
PITTSBURGH • DETROIT • ST. LOUIS
CHICAGO • SAN FRANCISCO • HOUSTON

▲ Mention Item NED-6432 when writing ▲

TRACING CLOTH THAT DEFIES TIME



● The renown of Imperial as the finest in Tracing Cloth goes back well over half a century. Draftsmen all over the world prefer it for the uniformity of its high transparency and ink-taking surface and the superb quality of its cloth foundation.

Imperial takes erasures readily, without damage. It gives sharp contrasting prints of even the finest lines. Drawings made on Imperial over fifty years ago are still as good as ever, neither brittle nor opaque.

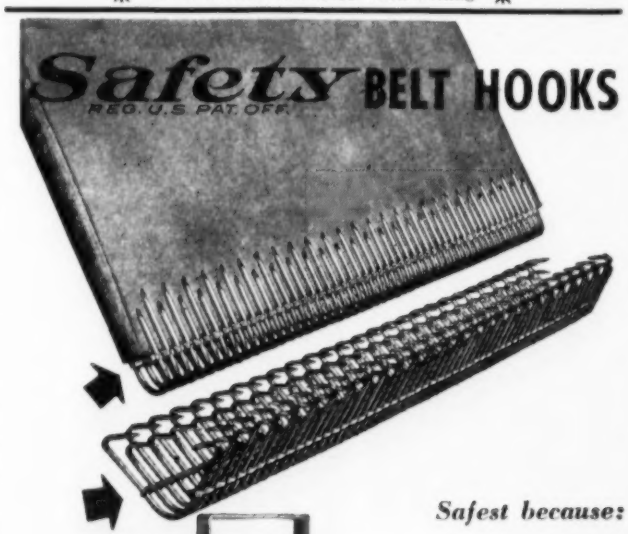
If you like a duller surface, for clear, hard pencil lines, try Imperial Pencil Tracing Cloth. It is good for ink as well.

IMPERIAL TRACING CLOTH

SOLD BY LEADING STATIONERY AND DRAWING MATERIAL DEALERS EVERYWHERE

▲ Mention Item NED-6433 when writing ▲

Safety BELT HOOKS
REG. U.S. PAT. OFF.



Safest because:

Hooks are rigidly held in accurate alignment by patented steel binder bars before, during and after application, distributing tension uniformly across the belt, assuring maximum traction and minimum wear. Patented binder bars lap over belt end, prevent fraying. Sizes for all belts. Costs no more than ordinary belt hooks. Write for circular.

Safety Lacing Machines Apply All Makes

SAFETY BELT-LACER CO.
5378 N. MENARD AVENUE
CHICAGO 30, U. S. A.

▲ Mention Item NED-6434 when writing ▲

SAVE up to 85% on NEW WAR SURPLUS

New Double Acting HYDRAULIC CYLINDERS

51 Types, shapes. 1001 Labor Saving Adaptations for Pushing, Pulling, Lifting. Finest Precision Work, Materials. All Accessories, Fittings, Valves, Pumps. 15% OF GOV'T COST - WRITE FOR CATALOGUE

Vickers Hydraulic Transmission

Self contained. 2 H. P. constant torque at all speeds with variable volume reversible, piston pump (controlled by outside lever) supplying piston hydraulic motor. Automatic pressure, dash pot for smooth control. Power output R. P. M. O to ½ input R. P. M. 1800 continuous 4000 intermittent. Dash pot can be removed for greater R. P. M. Ideal for Lathes. Duplicator Setup on Mills. Conveyors. Small Cars. Drives. Gearing. Etc.

COST GOVERNMENT APPROXIMATELY $400.00. You'll Chortle when you get it for ONLY $19.50

Uni. Joints. Gear Trains. Power Take-offs. Drives Appcble. to a Multde. of adaptations also avable.

PNEUMATIC DRILLS, TOOLS, & RIVET GUNS

AIR DRILLS OR MOTOR SPECIAL

with ¼" ICB Chuck $17.50

Also Nut Runners Screwdrivers Squeezers Angle Drills, Etc. Popular Makes

RIVET GUNS Pistol & Gooseneck Type

#101 E3, E2, 3X, Pistol 2X, OY, $55 Val. $8.95

Write in for FREE 92 Page Catalogue

POWER TRANSMISSION UNIT A $600 Value for $249!

Link Belt Co. Power transmission Unit with General Electric 220-440 V. AC. 60 cycle. 3 phase. 2 H. P. Synchronous motor, full speed 1,800 r.p.m. 4 speed with neutral gear transmission with following speed at 1800 r.p.m. Motor travel. High - 33.65 R.P.M. — High Inter - 15.18 R.P.M. — Low Inter 6.89 R.P.M. — Low - 3.11 R.P.M. Constant Torque. Complete with mounting flanges, lifting lugs. Overall size 27" high x 28" wide x 33" long. Ideal for controlled conveyor line, electric dolly, etc. NOW $249.00

Just Purchased $600,000 Inventory of New Cutting Tools, Taps, Drills, Milling Cutters, Metal Saws, etc. TREMENDOUS SAVINGS! WRITE FOR LIST. ALSO FOR NEW 1949, 92 PAGE CATALOGUE.

We stock Aluminum, Magnesium, Brass, Copper, Steel in sheets. Bar Tubing and Angles, Plexiglass, Lucite, Phenolic, A & N Fittings, Rivets, Bolts, Nuts, Aircraft Supplies. Just arrived - 5000 lbs. of ¼" and 5/16" Plexiglass in full sheets 36" x 48" - also 15,000 lbs full sheets of Nascolite ⅛" x 36" x 48" - all masked and new.

PALLEY SUPPLY CO. DIVISION NED-9 6321 SAN FERNANDO RD. GLENDALE 1, CALIFORNIA

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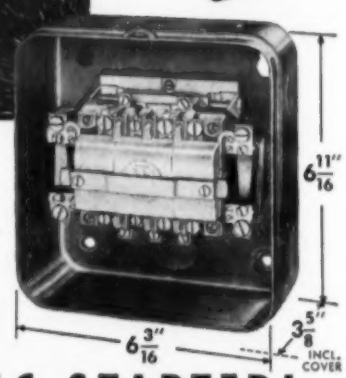
EASY to Wire to Service

THE SMALLEST STARTER on the MARKET



ARROW AH HART

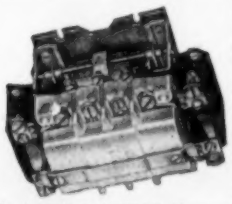
NEW "RA" SIZE 1 MAGNETIC STARTER!

Working electricians, installation and maintenance men find the design of the new A-H "RA" Magnetic Starter makes wiring easy. It's straight through — all the way — gives plenty of wiring room in the box and saves mounting space on installation.

Servicing is easy, too. All terminals and contacts can be reached quickly — with no loss of time or motion. Lots of performance is packed into this smallest starter enclosure — 6-3/16" x 6-11/16" x 3-5/8". It's easy to install the unit into small spaces for accessibility and convenience.

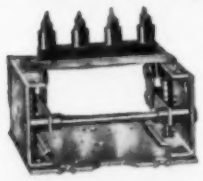
BIG, TOUGH CONTACTS

Rugged, heavy duty, copper contacts, with special silver alloy tips, take plenty of punishment. Special spring-loaded keys provide speedy and easy change when maintenance is necessary. No loose parts.



PLASKON ALKYD PROTECTION

New compound in starter base and hood gives 50 to 65% higher resistance to tracking than next best material. Provides hard, durable surface and superior dimensional stability. Gives you maximum performance, safety and long life in all A-H "RA" Magnetic Starters.



FULLY BALANCED MECHANISM

Right angle *balanced* mechanism multiplies leverage — transfers it from a vertical to a horizontal plane. Increases contact pressure — reduces volt-ampere consumption. There's no extra load to lift because the right angle moving mechanism is *balanced*.

The new Type "RA" is available in sizes 0, 1, 2 and 3, to handle motors up to 50 H.P. at 440 and 550 volts.

CONTROLS and APPARATUS FOR Outstanding PERFORMANCE

WRITE TODAY FOR LITERATURE 6009 HAWTHORN STREET HARTFORD 6, CONN.

ARROW-HART THE ARROW-HART & HEGEMAN ELECTRIC COMPANY HARTFORD 6, CONN., U.S.A.

▲ Mention Item NED-6437 when writing ▲

PRECISION TACHOMETER

for high speed measurement over rotational range of 0-17,000 rpm

Consisting of high frequency pulse generator or pickup, electronic counting circuit and two speed indicating units, this instrument can be used in testing efficiency of steam turbines. In this application, magnetic pulse generator fits on periphery of drum which is attached to shaft of test machine. One side of drum contains 150 magnetic poles and other side 1500. When rotated, drum generates electrical impulses in magnetic pickup which are carried to electronic circuit and there counted at speeds up to 50,000 cycles per second. Indicators do necessary calculation and interpolation. Revolutions per minute, in figures 1 in. high, are flashed on opal glass screen every second.

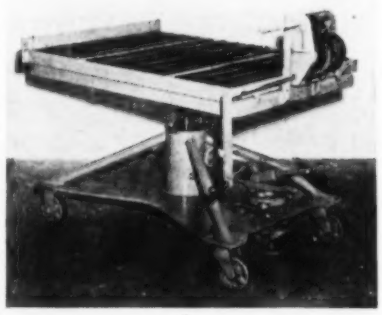
Up to 4000 rpm, 1500-pole side of generator gives accuracy within 0.1-rpm; while over 4000 rpm, magnetic pickup automatically shifts to 150-pole side and readings are accurate to 1 rpm.

Electronic counting circuit is housed in 200-lb cabinet which measures 5 x 2 x 1½ ft. Speed indicator is housed in separate cabinet measuring 2 x 2 x 1½ ft. Electromagnetic tachometer generator weighs 5 lb and measures 6 x 8 x 4 in. Two hundred feet of cable can be used between generator and control cabinet and another 200 ft of cable can be used between control cabinet and indicating units. Made by **General Electric Co.**, Schenectady 5, N. Y.

▲ Mention Item NED-6438 when writing ▲

DIE TABLE

redesigned hydraulic elevating type features roller top and winch



Furnished with 31 x 42-in. top, this hydraulic die table has thirteen rollers set on 3-in. centers which extend slightly above side channels so that large overhanging dies can be handled. Single removable retaining bar prevents dies from rolling off open end of table. To pull dies from presses and storage racks, 35:1 hand winch is furnished with 15 ft of steel cable.

Table elevates from lowered position of 22 in. to height of 30 in. Greater ranges of elevation can be furnished. Single-speed foot pump enables operator to position accurately dies weighing as much as 2000 pounds. Two 5-in. diameter swivel casters and two 5-in. rigid casters facilitate rolling. Floor lock holds table firmly in position for die transfer work. Die separating device made up of overhead rack with suspended chains is available as optional equipment. Made by **LYON-Raymond Corp.**, 2753 Madison St., Greene, N. Y.

▲ Mention Item NED-6439 when writing ▲

SAFETY FACE SHIELD

incorporates glare-reducing visor

In addition to protecting face and eyes against physical injury from flying particles, Big 6 industrial face shields provide vision protection. Most models in line incorporate transparent green plastic visor which affords protection against light glare on vision area of plastic windows.

In addition to fiber and plastic combination, shields are available made entirely of plastic at reasonable cost. Plastic does not absorb grease or hold dirt and is easily wiped clean. Shields of all types are light in weight for wearing comfort and feature adjustment slots to enable wearer to adjust window at desired distance from face. Shields which have full-circle rigid headgear have two-button head size adjustment so that wearer can fit headband while wearing shield. Line includes collapsible shields which can be shipped and stored in flat form to save storage space and shipping costs. Made by **Byrne Industrial Services**, Safety Products Div., Dept. 1, 35 E. Wacker Dr., Chicago 1, Ill.

▲ Mention Item NED-6440 when writing ▲

FASTER • SOLDERING • BRAZING • HEAT TREATING

Improved SIECO INDUCTION SOLDERING TURNTABLE

Interchangeable Heads For wide range of production parts. 6-24 stations depending on size of work piece.

Variable Speed Drive Adjustable to maximum operator efficiency plus uniform high quality.

Simplicity Easy, direct loading, convenient control.

Complete Production Set-ups 1KW, 2KW, 7½, 15KW Induction Heaters, Turntables, Feeding Systems, Coils, etc.

Samples Processed for Rated Companies

Literature on Request

Manufactured by SHERMAN INDUSTRIAL ELECTRONICS CO. 505 Washington Ave. • Belleville 9, N. J.

District Representatives

NEWARK	DETROIT	CLEVELAND	BOSTON
Belleville 2-3833	University 3-9100	Main 0112	Waltham 5-6900

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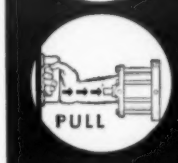
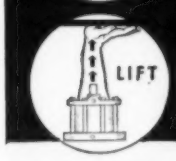
T-J CYLINDERS

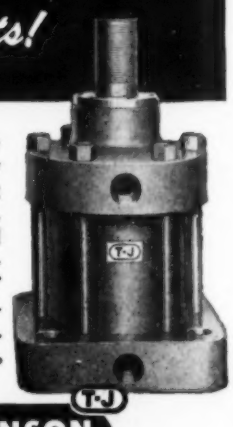
Save Labor!



Speed Production!



Cut Costs!



T-J Air and Hydraulic Cylinders are built for 1001 tough jobs in industry ... where pushing, pulling or lifting is needed ... 100 lb. or 50,000 lb. Available in many standard sizes and styles ... both cushioned and non-cushioned types. Backed by 32 years' experience ... built for long-life dependability. Write for latest catalogs. The Tomkins-Johnson Co., Jackson, Michigan.

TOMKINS-JOHNSON RIVETERS...AIR AND HYDRAULIC CYLINDERS...CUTTERS...CLINCHERS

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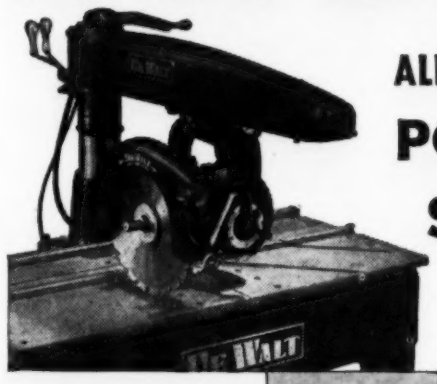
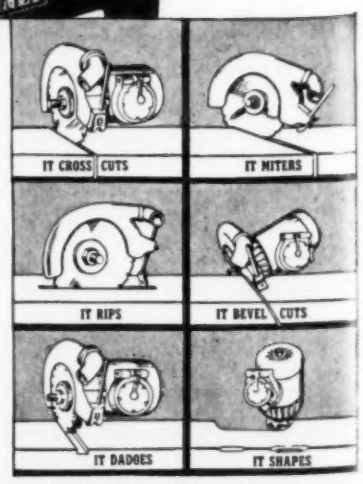
THE NEW DEWALT ALL-PURPOSE POWER SAW!



Does the work of many *machines!* Accurate, flexible, dependable — precision built for continuous service.

Write for catalog.



DEWALT, INC. 129 Fountain Ave. Lancaster, Pa.

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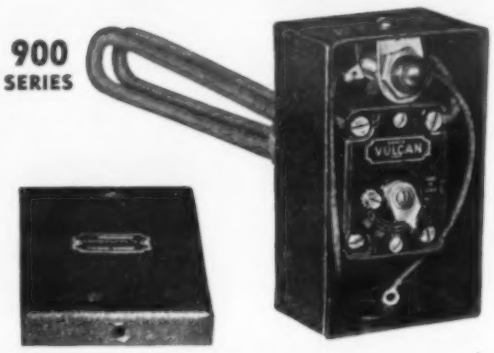
VULCAN

900 SERIES



THERMOSTATICALLY CONTROLLED

Electric Immersion Heaters for Water, Oils and Chemicals

For Industrial and Domestic Hot Water Heaters, Dish Washers, Steam Tables, Coffee Urns, Sterilizers, Stills, Laboratory Equipment and similar devices. Easily, quickly and economically installed in any present equipment that requires heat for liquids, without disturbing existing plumbing. Plugs in any convenient outlet.

Efficient for Heater Tanks for plastic coating requiring temperatures up to 200 degrees, F.

By the makers of Vulcan Electric Soldering Tools, Solder Pots, Glue Pots, Branding Irons and Heating Elements.

VULCAN ELECTRIC COMPANY
DANVERS 7, MASS.

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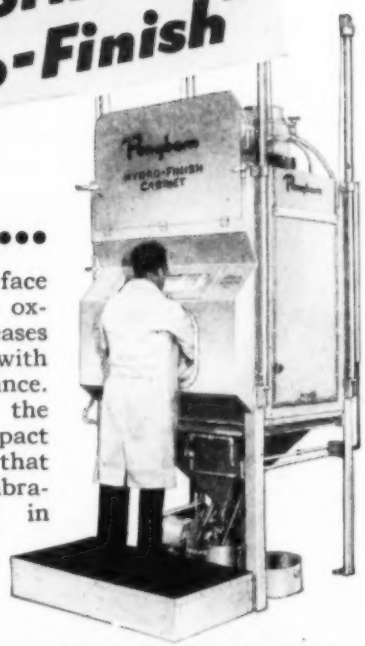
TOOL and DIE USERS!

Pangborn "Hydro-Finish"



Can Help You...

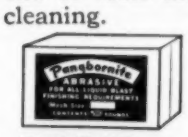
It improves surface finishes, removes oxide scale, increases tool and die life with proper maintenance. Hydro-Finish is the new versatile impact blasting process that uses a fine mesh abrasive suspended in water and holds tolerances to .0001 inches.

In the Tool Room, Hydro-Finish simplifies the manufacture and maintenance of tools, dies and molds. It reduces usual costly handwork and produces a surface virtually free from directional grinding lines.

In the Production Line, Hydro-Finish eliminates many tedious finishing operations. It reduces cost and time involved in buffing. It improves fatigue life and cuts many varied manufacturing costs.

It can be used for deburring, surface finishing and lubrication control, removing scale and discoloration, preparing surfaces for plating or coating, removing directional grinding lines, finishing threaded section for workability and fit, improving manufacturing, maintenance and life of tools and dies, general maintenance cleaning.

Find out how Hydro-Finish can help you. Write for Bulletin 1400 to PANGBORN CORPORATION, 1294 Pangborn Blvd., Hagerstown, Md.



PANGBORNITE . . . best abrasive for all liquid blasting needs. Available in many mesh sizes.

Look to Pangborn for all the latest developments in Blast Cleaning and Dust Control.

Pangborn
BLAST CLEANS CHEAPER
with the right equipment for every job

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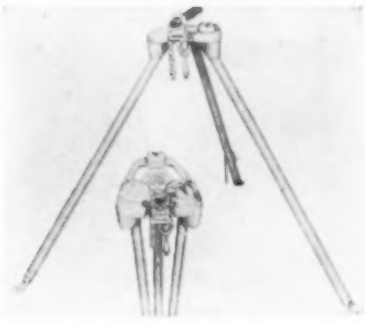
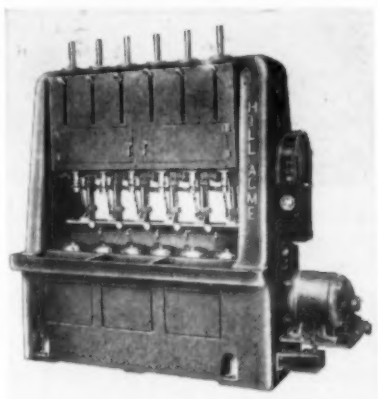
LIGHTWEIGHT VISE-STAND
combines vise, stand and pipe bender



This aluminum vise-stand has rigidity and strength comparable to those of iron or steel models although its weight is only approximately half as much. Base is made from aluminum alloy which has high tensile and impact properties, and its heavily reinforced design prevents distortion under severe service. Two pipe benders are provided, one for pipe up to ½-in., and other for pipe up to ¾-in. Stand includes No. 1 Vulcan pipe vise which accommodates ⅛ to 2-in. pipe. Recess for oil can and handy slots for tools are provided in addition to "V" pipe support. Aluminum alloy legs can be folded and tied together with permanently attached chain. Made by **J. H. Williams & Co.,** NED-9, 400 Vulcan St., Buffalo 7, N. Y.

▲ Mention Item NED-6446 when writing ▲

TAPPING MACHINE
multiple spindle models have capacities of 1 and 2 in.



Built in six and eight-spindle models and in standard capacities of 1 and 2 inches, model XC-W semiautomatic tapping machine is adaptable for tapping couplings or nuts. Larger sizes are built in four or six-spindle design. Powered by 10-horsepower motor operating at 1800 revolutions per minute, machine has spindle speed of 59 to 191 revolutions per minute.

Tappers have integral-design housing and truss mounted on box-type base. Spindles have 8-inch travel and are splined and independently operated by worm drive mounted on antifriction bearings. All working parts are enclosed. Worm cam provides quick return of spindles to upper positions. Separate adjustable hydraulic spindle checks cushion downward travel of spindle and prevent injury to taps from impact.

Scroll type, self-centering, air-operated chucks are automatically controlled by valves through vertical movement of spindles. Chucks have three-point contact, receive removable inserts and are adjustable within size range of couplings. Taps can be removed from sockets for unloading while spindles are rotating. Spindle speed changes are obtained by helical pick-off gears. Impeller-type motor-driven pump supplies coolant to all spindles. Made by **Hill Acme Co.,** Acme Machinery Div., 4537 St. Clair Ave., Cleveland 14, Ohio.

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Cut Air-Hose Costs — Prevent Accidents
Speed-up Production — Save Time . . .

with CHAMPION AIR-HOSE REELS
FOR CEILINGS—WALLS AND FLOORS

Champion Air-Hose Reels more than pay for themselves in the hose they SAVE. Champion Reels keep hose *off-the-floor,* eliminate the danger of tripping. Air-hose is always convenient to operator . . . a time saver that speeds-up production. Stays put at desired length—a slight pull rewinds hose at governed speed. Fully enclosed reel housing with swivel or stationary mounting. Furnished with 30 or 35 foot hose. Write TODAY for complete data sheet.

9616

CHAMPION PNEUMATIC MACHINERY CO.
8180 SOUTH CHICAGO AVENUE • CHICAGO 17, ILLINOIS

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KINNEAR STEEL ROLLING DOORS

They open upward . . . coil out of the way . . . save floor and wall space . . . feature all-metal ruggedness that combines more years of low-cost operation with extra protection against fire, wind, weather and accidental damage. Motor or manual operation; any size. Write for newest catalog.

The KINNEAR Mfg. Co.
3017 Fields Ave. Columbus 16, Ohio
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Saving Ways in Doorways
KINNEAR ROLLING DOORS

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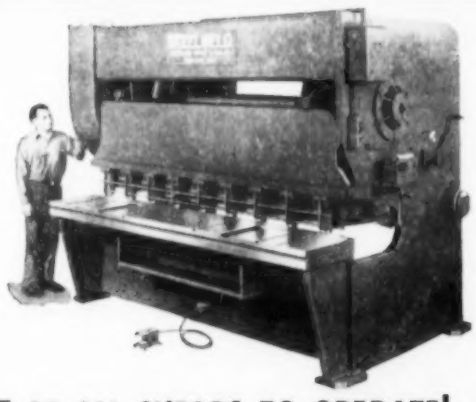

EASIEST OF ALL SHEARS TO OPERATE!

"Easiest of all shears to operate"— so many operators say of Steelweld Pivoted-Blade Shears. These machines are radically different from all other shears. They have many new features heretofore unavailable that ease the work, speed production, increase accuracy, reduce maintenance.

Get the facts on Steelweld Shears. Built in all sizes for plate up to 18 feet long or 1-1/4" thick.

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THE CLEVELAND CRANE & ENGINEERING CO.
6608 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

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new CRANE catalog helps you select Corrosion-Resistant Piping Materials

FREE ON REQUEST
Ask for 36-page Circular 320

Be sure to get this informative, easy-to-use guide to the Crane line of valves, fittings, and piping for corrosive services. Besides giving you all essential specification data, including prices, it helps to simplify selection. There's a whole section of condensed recommendations on materials for handling more than 250 different fluids. The "Corrosion Questionnaire" on page 19 gives you a check on other important factors of equipment selection.

NEW VALVE DESIGNS

Get this catalog to see the many new items in the Crane Alloy line offering greater values and better service for a wider range of corrosive applications than ever before. Ask your Crane Representative for a copy, or **write for Circular 320.**

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

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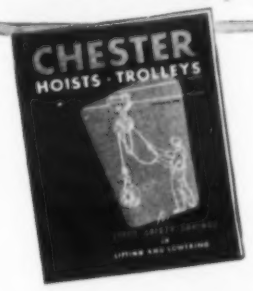
Here's Help in
LIFTING • LOWERING PLACING
of Heavy Materials



- EASIER
- FASTER
- SAFER at
- LOWER COST

Send for Helpful New Catalog

Chester Hoists and Trolleys, in their basic forms and a number of special adaptations, are being successfully used in every type of industry. Time and again, they have *proved* themselves to be a self-liquidating investment in better materials handling—by saving valuable man-hours, eliminating damaged materials and production delays. This new catalog tells you why—and how. Send for it today!

THE NATIONAL SCREW & MFG. CO.
Chester Hoist Division • Lisbon, Ohio

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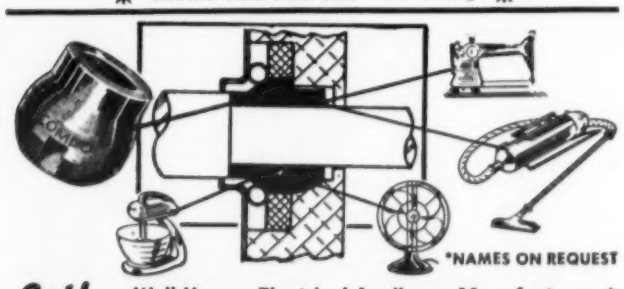

Why Well-Known Electrical Appliance Manufacturers* Demand **"COMPO"** FOR SELF-ALIGNING MOTOR BEARINGS

Designing Bound Brook "COMPO" Self-Aligning Bearings into their electric motors proved a real cost-saving way to insure motor-shaft alignment, less wear on parts, and smoother, quieter performance. It also meant:

TO MANUFACTURERS,
- *Simplification of design and quicker, easier assembly.*
- *Elimination of oil cups, machining, drilling, tapping and grooving of the housing, required with other designs.*

TO USERS,
- *No periodic lubrication and quiet, trouble-free performance—under both continuous and intermittent operation.*

"COMPO" Porous Bronze Bearings are made from pure metal powders, die-formed to shape, alloyed at high temperatures, finished to exact dimensions, and vacuum-impregnated with lubricant.

Thousands of "COMPO" Bearing sizes can be made from existing dies; hundreds of sizes in stock for prompt shipment.

Send for our "COMPO" Bearing Stock List

"COMPO" OIL-RETAINING POROUS BRONZE BEARINGS

BOUND BROOK OIL-LESS BEARING COMPANY
BOUND BROOK, N. J. • *ESTABLISHED 1883*
BEARINGS • BUSHINGS • WASHERS • PARTS

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Speed Sweep
THE BRUSH WITH THE STEEL BACK

Sweeps Cleaner, Faster, Easier
Outlasts Ordinary Brushes 3 to 1

Here is the one and only brush that is specially designed to do a more thorough sweeping job with less effort. It is also the only brush that is constructed to outlast ordinary brushes. Send coupon today for complete information and prices. *Milwaukee Dustless Brush Co., Milwaukee 3, Wis.*

There's a style and size of Speed Sweep for every sweeping need.

Milwaukee Dustless Brush Co.
530 N. 22nd St. • Milwaukee 3, Wisconsin
Send complete facts about Speed Sweep brushes.
NAME_____
ADDRESS_____
CITY_____ STATE_____

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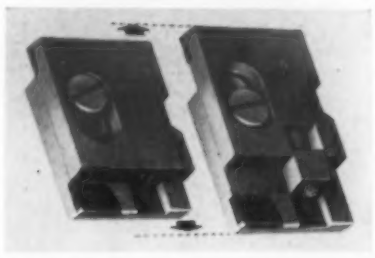
EXPANSION BLADE
fits standard reamers and boring bars



Having tungsten carbide tips for wear resistance, this adjustable expansion blade is suitable for use in standard reamers and boring bars. Wide range of standard sizes up to 4-in. diameter is available from stock. Adjustment and locking are effected by means of screwdriver. Made by **Super Tool Co.**, 21640 Hoover Rd., Detroit 13, Mich.

Mention Item NED-6455 when writing

CONVEYOR ACCESSORY
automatically diverges line of packages into two lines

Designed to handle commodities of same width or of not more than 1-in. variation and having one flat riding surface, Auto-Diverger will take units coming end to end from single line and divide them into two lines in any desired proportion. With electric eyes installed across receiving lines, it is possible to keep each line filled to capacity required. If demand is greater on one line, it will automatically receive packages in amount equal to demand. Diverger can be fed by either belt or live roller horizontal power conveyor, and receiving conveyors should be gravity type. Made by **Standard Conveyor Co.**, 831 E. Seventh St., North St. Paul 9, Minn.

Mention Item NED-6456 when writing

PALLET LIFTER
portable hydraulic unit has 500-lb lift for general materials handling

Model No. 40 PC Pallet Crane permits handling shipping cases and barrels, foundry patterns, dies, coils, motors, engines, castings and other items in and around shops or warehouses. It can be supplied with either hand hydraulic or motorized lift. Steel plate 16 x 24-in. pallet lowers to floor level and can be elevated to maximum height of 5 ft 6 in. Manual floor brake holds crane in any desired position and prevents its movement away from truck tail gate, press or workbench. Four steel wheels provide portability; and since legs of crane are longer than pallet reach, they can be rolled under benches or machines. Made by **Grand Specialties Co.**, 3135 W. Grand Ave., Chicago 22, Ill.

Mention Item NED-6457 when writing

WATER STILL
stainless steel laboratory model is designed for easy cleaning

Constructed in three offset sections with vapor-tight sliding joints, Streamliner laboratory water still can be taken apart quickly for cleaning without use of tools. It incorporates built-in aftercooler and tall large diameter vapor flue with Vapor-Maze multiple baffles and vapor scrubber. Volatile gases are completely liberated. All surfaces touching vapor and distilled water are block tin coated, and no gaskets are employed.

Operation is continuous and automatic. Inlet water is used to cool condenser and is thus preheated to about 200° F before entering evaporator. Available in electric, gas and steam-heated models, still can be supplied with capacities from 1 to 4 gph. Made by **Precision Scientific Co.**, 3735 W. Cortland St., Chicago 47, Ill.

Mention Item NED-6458 when writing

It's a Robins Troughing Idler—with features no other belt conveyor idler can offer.

Robins Ball Bearing Troughing Idlers fit belt conveyors up to 36" wide. Robins Roller Bearing Troughing Idlers have exclusive Triple Grease Seal which locks grease in, keeps dirt and moisture out. Sizes to fit belt conveyors up to 60". Both types provide exclusive One-Shot Lubrication.

Immediate shipment from stock. Most sizes of Robins Idlers now carried in stock for immediate shipment. For Troughing, Return, or Flat Belt Idlers write for Bulletin 120-A.

ROBINS IDLERS
ROBINS CONVEYORS DIVISION
Hewitt-Robins Incorporated
Passaic, New Jersey

Mention Item NED-6459 when writing

THREE SAFE, SURE CONTROLS for HAZARDOUS LOCATIONS
Enclosed in Approved Blast-Proof, Dust-Tight Housings

TYPE EJO THERMOSTAT A precisely adjustable control. Narrow calibrated ranges for liquids or gases. Adjustable ranges, 120 F or 250 F between limits of −120F and 600F. Ratings AC 1200 watts 125-250 V AC. Uses any United remote bulb assembly.

TYPE EJR VACUUM SWITCH For close differential control on exposed applications. Ranges from 0-180 psi pressure, 30" Hg vac to 20 lb. press. Diff. 4" WC to 2 lb. adjustable or fixed at customer's option.

TYPE EGL PRESSURE CONTROL A rugged pilot switch for industrial uses involving the control of air, gas and liquids. Ranges from 0-350 psi. Diff. from 2-15 psi, electrical ratings AC 1200 watts 125-25 V AC.

All controls tapped for standard pipe fitting. All may be mounted in any position.

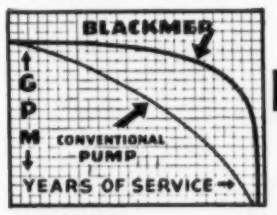
Write for complete details today

UNITED ELECTRIC CONTROLS COMPANY
81 School Street
Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

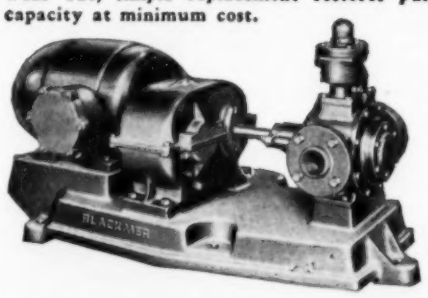
Mention Item NED-6460 when writing

BLACKMER ROTARY PUMP PERFORMANCE



CUTS Liquid Handling COSTS

Vanes automatically compensate for wear to maintain high efficiency and low power costs. When vanes eventually wear out, simple replacement restores pump to normal capacity at minimum cost.



Swinging Vanes

Sliding Vanes

Capacities from 5 to 1500 g.p.m. Temperatures to 600° F. Complete operating data in Bulletin 307, "Facts About Rotary Pumps." Tells how Blackmer pumps cut costs. Write for your copy.

Choice of two constructions provides efficiency not obtainable with "universal" type pumps.

BLACKMER PUMP COMPANY
GRAND RAPIDS, MICHIGAN

Mention Item NED-6461 when writing

HERE'S A QUICK, LOW-COST SOLUTION

CHROMALOX *Electric* **HEAT**

Economical CHROMALOX Electric Heaters can be installed anywhere to provide efficient "on the spot" heat at accurately maintained temperatures in all types of applications. They may be used to heat gases and liquids; to heat dies, molds and platens, to melt soft metals and for hundreds of other uses. 10,000 types, sizes and ratings are available for almost any need! Nationwide engineering assistance is yours without obligation.

Get Your Copy of **CHROMALOX CATALOG 42**

It shows many of the 10,000 types, sizes, ratings of Chromalox Electric Heaters. Write today:

EDWIN L. WIEGAND CO., 7509 THOMAS BOULEVARD, PITTSBURGH 8, PA.

See other advertisement on page 4

CHROMALOX 18-94

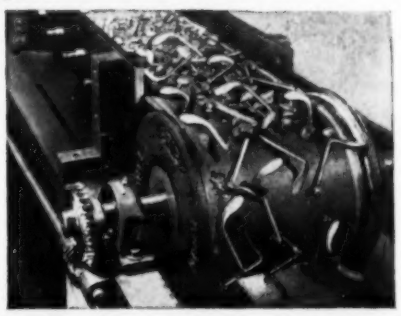
ELECTRIC HEAT FOR MODERN INDUSTRY

Mention Item NED-6462 when writing

Eriez **NON-ELECTRIC MAGNETIC PULLEY**

Increases Production 1200%

from 2½ hrs. to 10 minutes



Close-up of Eriez pulley at L. C. Smith and Corona Typewriter, Inc. Available in 78 sizes.

L. C. Smith and Corona Typewriters Inc., now separates tumbling stones from metal working parts in ten minutes — a job which formerly took two and half hours. And this amazing cost saving was affected by the use of an Eriez Non-Electric Permanent Magnetic Pulley. Previous to this Eriez installation, separation was done manually —2½ hours was needed for each barrel. Since the Eriez Pulley is completely non-electric and requires no electricity, it can be mounted on a portable conveyor and used on any number of lines. Separation is automatic and complete. Eriez makes a full line of permanent non-electric magnets. Their versatility of application is almost unlimited; perhaps it's the separation of ferrous from non-ferrous materials, the protection of machines, the conveying of pipe, angles, sheet steel, etc., or for use in the foundry, galvanizing baths or machine operations. Whatever the job, there's an Eriez magnet for it.

Perhaps you have a metal separation or material handling problem that Eriez can solve quickly and economically. Magnetic application engineering is yours for the asking. Representatives in all principal cities. *Write, wire or phone Eriez Manufacturing Co.*

SEE OUR CATALOG IN SWEET'S — See our catalog P $\frac{1b}{2}$ Sweet's Process Industries File.

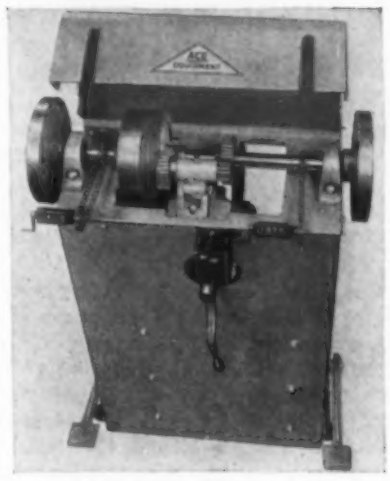
Pioneer of Permanent Magnetic Separation

ERIEZ MANUFACTURING CO.

59 East 12th St., ERIE, PA.

Mention Item NED-6463 when writing

COIL WINDING MACHINE for production and repair work

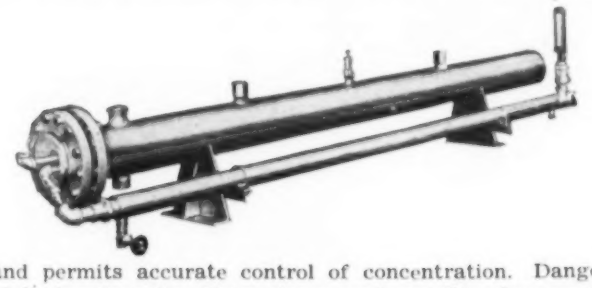


Lever shift four-speed transmission gear box of Ace No. 3 coil winding machine delivers open-belt speeds of 145, 192, 310 and 554 rpm and back gear speeds of 30, 40, 64, and 122 rpm from 1½-hp 1200 rpm motor. No - grab clutch and brake combination is utilized as are V-belts on both heads, and plate measures 10 in. and has four open slots for forming various shapes. Steel cabinet and aluminum hood enclose machine. Motor, gear box, clutch and main shaft are equipped with ball bearings. Machine is supplied with one or two face plates, counters and control pedals. Made by **Armature Coil Equipment, Inc.** 2605 Vega Ave., Cleveland 13, O.

Mention Item NED-6464 when writing

CONTINUOUS BLOWDOWN removes impurities from boiler

Designed for small plants rated under 500 boiler horsepower, Packet type continuous blowdown operates automatically. It affords correct blowdown regardless of load



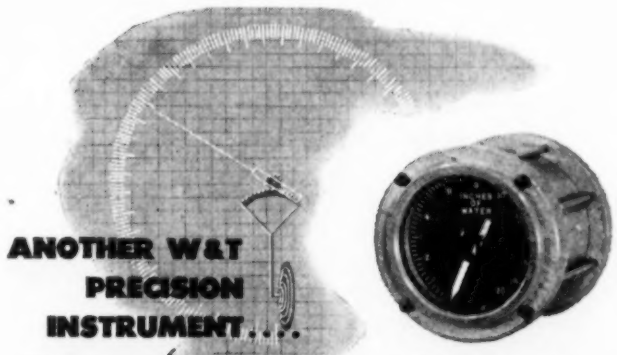
and permits accurate control of concentration. Danger of boiler deposits, dirty steam and possible damage to equipment is eliminated. Simple control is set to establish the amount of blowdown in proportion to quantity of make-up water and its impurities. Heat in blowdown water is saved because it is transferred to incoming feedwater in integral heat exchanger. Unit is packaged and self-contained and is easy to install. Made by **Henszey Co.,** 203 N. Water St., Watertown, Wis.

Mention Item NED-6465 when writing

DO YOU KNOW?

■ CYCLING after dark is expected to be safer as result of development of 'sealed beam' headlamp which operates satisfactorily on 5-volt battery or electric generator. Beam pattern is approximately 5 feet wide and 30 feet long which is ample to see obstacles and serve as marker light. Made by **General Electric Co.,** Lamp Div., Dept. 166-NED, Nela Park, Cleveland 12, O.

Mention Item NED-6466 when writing



ANOTHER W&T PRECISION INSTRUMENT....

The W&T Precision Low Pressure Gauge

The W&T Precision Low Pressure Gauge has proved to be the answer to the problem of measuring low pressure accurately by successful use in such fields as aircraft flight testing, automotive research work, and engine and ventilation studies. Built with custom care from its beryllium copper capsule to its individually calibrated dial, the W&T Low Pressure Gauge is a precision instrument of the highest grade.

Here are some of its outstanding features:

- Sensitive to 1 part in 500
- Available in ranges from 0-10" of water to 0-400" of water
- Measures differential pressure
- Unaffected by gravity or acceleration
- Equipped with expanded scale if desired

Write now and tell us your low pressure measuring requirements. We'll be glad to help — no obligation, of course.

A-15

WALLACE & TIERNAN PRODUCTS, INC.

ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS

Belleville 9, New Jersey • Represented in Principal Cities

Mention Item NED-6467 when writing

- A New lightweight tubular steel scaffolding designed to fill all of your maintenance scaffolding needs and at a low cost comparable to bulky wood-type scaffolding.
- And, the time saved in erecting and disassembling, plus the ease of storing and moving, will more than pay for the scaffolding. See Ladscaf — distributors in principal cities.

• Exebit Scaffolding • Mobile Maintenance Stands • Elevating Maintenance Towers • Portable Bleachers • Material Handling Towers and Bucks • Agricultural Equipt. General Fabricators of Tubular & Light Steel Products

Send for Ladscaf Bulletin No. 18

UNIVERSAL MANUFACTURING CORP. ZELIENOPLE, PA.

World's Largest Manufacturer of Steel-Panel Scaffolding

Mention Item NED-6468 when writing

Empco **JACKS** . . . just a twist of the wrist and your machines are LEVELED!

To lower, turn screw to left.
To raise, turn screw to right.

SELF-ALIGNING SMOOTH, ACCURATE POSITIVE ADJUSTMENTS!

AVAILABLE in 3 SIZES

No. 1 2" normal height
No. 2 2⅜" normal height
No. 3 3⅛" normal height

Machine Tool Manufacturers strongly emphasize the need, not only to set machines level, but to keep 'em that way. Periodic re-leveling is essential for accurate work tolerances. How often, depends on the type of foundation. No method of machine setting is stable enough to maintain the accuracy of initial leveling. It is important to check after first month of operation, then check periodically and re-level whenever necessary.

When a machine is set on EMPCO JACKS, the whole operation is the work of but a moment: Simply apply a wrench to the "hex" screw head, turn right or left until your level indicator reads "zero".

EMPCO

THE ENTERPRISE MACHINE PARTS CORPORATION

2727 JEROME AVE. DETROIT 12, MICH.

Mention Item NED-6469 when writing

O.K. GANG SLITTER KNIVES *for longer service*

Made in O.K. Battle Axe, Dura-Chrome or Standard Carbon Grades. Precision ground to ±.0002 tolerances on thickness, diameter and bore. Extremely high finish. SPACERS for above in hardened or unhardened grade ground to same tolerances as Slitters. We make rotary cutters similar to the one shown for trimming sheet steel, light plates. Some are made with bevels for cutting paper, rubber, plastic, cloth, etc.

O.K. ROTARY SHEARS & BLADES *for maximum toughness*

The **OHIO KNIFE** *Co.*

CINCINNATI 23, OHIO, U. S. A.

CLIP AND MAIL TODAY

THE OHIO KNIFE CO., CINCINNATI 23, OHIO 4

Gentlemen: Please send without obligation specific data on knives I have checked.

☐ CIRCULAR KNIVES ☐ SHEAR BLADES

COMPANY_____

NAME_____

ADDRESS_____

Mention Item NED-6470 when writing

▲ Mention Item NED-6472 when writing ▲

IMMEDIATE DELIVERY

STEEL LOCKERS by MEDART

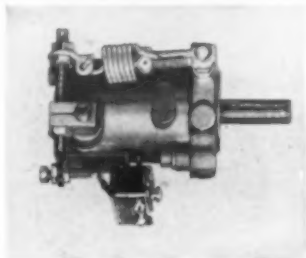
Medart *all-steel* Lockers are now available for *immediate delivery* . . . In sizes and types to fit every industrial need . . . Medart has been supplying lockers to industry for more than a quarter of a century . . . Remember! There are other lockers that have some features that were originally developed by Medart . . . only MEDART LOCKERS have all those features which have earned for Medart the slogan "The Standard of Comparison."

Write for Descriptive Literature and Prices.

FRED MEDART PRODUCTS, INC.
3539 DEKALB STREET
ST. LOUIS 18, MISSOURI

▲ Mention Item NED-6473 when writing ▲

CENTRIFUGAL GOVERNOR
precision switch turns off motor



When predetermined speed limit has been exceeded, this Micro switch centrifugal governor will turn off motor, engine or other electrically energized equipment. It is especially recommended for situations in which investigation or corrective measures must be taken before 'runaway' equipment is put back into operation. As switch must be reset manually before motor can be started again, damage is averted until repairs can be made. Micro switch is available on Pierce direct drive and cable driven centrifugal governors. Mercury arc switch performs same functions as Micro switch for operations involving fire hazards. Made by **Pierce Governor Co.**, 668 Wabash Ave., Anderson, Ind.

▲ Mention Item NED-6474 when writing ▲

UNIVERSAL COLUMN VISE
increases drill press output

Because single turn of handle frees jaws for push-pull opening or closing, Col-Vise speeds typical drill press operations. In addition, it often saves time and cost of making simple jigs and fixtures. It clamps to column of single or multiple spindle drill presses, is adjustable both angularly and radially and can be swung clear when necessary.

Vise has 1½ x 4-in. jaws with maximum opening of 6 in. and is available in models to fit drill presses with either stationary or movable tables. Column diameters of 1-7/16 through 3-29/32 in. can be accommodated. By removing column connection, vise can be adapted for use as quick-acting machine vise. Made by **Universal Vise & Tool Co.**, 106 Main St., Parma, Mich.

▲ Mention Item NED-6475 when writing ▲

SOCKET CLAMP
reinforces medium base units

Designed for use with all standard medium base electrical sockets, this clamp eliminates hazards of broken sockets. Device consists of two identically formed rings of cadmium-plated steel which fit over cap and shoulder of socket and are held together by two machine screws. One size clamp fits all sockets. Made by **Vimco Mfg. Co.**, 125 Brayton St., Buffalo 13, N. Y.

▲ Mention Item NED-6476 when writing ▲

RAIL YARD TRACK CLEANER
¾-cu yd bucket mounts on tractor

Accumulated engine fluff, dirt, debris, coal, ore and ashes are effectively removed from railroad switch and classification yards by utilizing Hough model HF Payloader tractor shovel equipped with special bucket. Tractor scoops up refuse from between rails and between sets of tracks, carries and dumps it directly into gondola or trucks. Special ¾-cubic yard bucket is 6 feet wide with semicylindrical tunnel at center which straddles rail so bucket cutting edge can dig below rail level. In top of tunnel is guide shoe with side flanges which ride rail, limiting digging depth of bucket and keeping it centered. Shoe is adjustable for different sizes of rail. Tractor has large pneumatic tires which cross over rails readily and permit it to travel anywhere under its own power at speeds up to 15 miles per hour. Made by **Frank G. Hough Co.**, 803-L Sunnyside Ave., Libertyville, Ill.

▲ Mention Item NED-6477 when writing ▲

3 EASY WAYS TO CUT MAINTENANCE PRODUCTION DOWNTIME COSTS with BOWSER ESTABLISHED 1885

HIGH EFFICIENCY FILTERS

Fig. 822

Fig. 832-P

Fig. 824

Lubricating Oils—The Fig. 822 filter, completely automatic and self-cleaning, prolongs bearing and oil life. It lengthens the time between overhauls. Especially suited for long and continuous filtration cycles or high capacity. Also filters coolants and cutting oils. Porosities .002 to .015 of an inch, capacities 120 to 360 g.p.m.

Turbine Oils—Turbine oils get a "bone dry" crystal-clear cleaning with the Fig. 832-P conditioner. Inhibitors are not disturbed—no aeration—no turbulence—no moving parts. Removes fly ash and colloidal suspended matter. Sizes from 90 to 1000 g.p.h.

General Purpose Unit—Fig. 824 handles a variety of filtering jobs up to 50 g.p.m. on lubricating oils, cutting oils and other industrial liquids. Long and continuous filtration cycle. Porosities .002 to .015 of an inch. Completely automatic and self-cleaning.

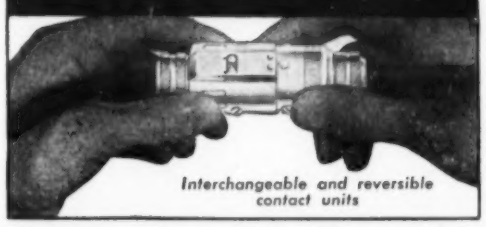
NOW is the time to move toward LOWER BREAK-EVEN POINTS! Bowser filters have helped in many plants. Write today for recommendations on the specific filtering needs of your paint.

BOWSER, INC.
1381 Creighton Avenue, Fort Wayne 2, Indiana

LIQUID CONTROL SPECIALISTS SINCE 1885

▲ Mention Item NED-6478 when writing ▲

Midget TRIPLOC



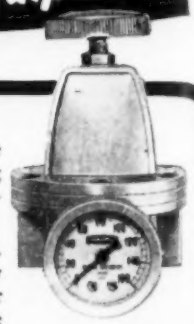
Compact, Heavy Duty Plugs and Receptacles

Midget Triploc plugs and receptacles are ideal for use with a great variety of portable electrical equipment where operating conditions are severe. Interchangeable 2, 3, or 4 pole contact units permit many different types of assembled combinations. The protected female contacts may be assembled in either plug shell or receptacle housing for protection in line side of circuit. Automatic Bayonet lock is simple and effective; polarity is maintained and correct insertion of plug assured by keyed housings and unequal spacing of contacts. Ground protection is provided when required. Rating 10A., 250V., 15A., 125V. Consult your Pylet Catalog 1100, Bul. 1140-1, page 19, for complete listings.

CONDUIT FITTINGS • FLOODLIGHTS
THE PYLE-NATIONAL COMPANY
1342 North Kostner Avenue • Chicago 51, Illinois

▲ Mention Item NED-6479 when writing ▲

HANNIFIN PROTECTION for air operated equipment



HERE is the new air pressure regulator that gives you everything you want for control and protection of air operated equipment.

NO DANGER OF PRESSURE BUILD-UP. Thanks to the automatic safety relief feature of Hannifin's "Air Warden" valve design. No pressure build-up above setting of regulator even if valve is accidentally prevented from seating tight.

SAVES AIR. Easy to "back off" pressure without exhausting control valve. No air lost except excess pressure.

PRECISION CONTROL. Instrument type adjusting knob. Precision construction throughout. Write for the full story.

HANNIFIN CORPORATION
1127 S. Kilbourn Avenue Chicago 24, Illinois

HANNIFIN AIR WARDEN REGULATOR

▲ Mention Item NED-6480 when writing ▲

SAVES LABOR... less fatigue!
SAVES TIME... greater cutting power
CUTS GRINDING COSTS

ARO AIR TOOLS
Also . . . LUBRICATING EQUIPMENT . . . HYDRAULIC EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

Straight or spade handle models. Speeds, 4200 to 6000 RPM for 6" and 8" grinding wheels, radial wire brushes or cup wire brushes.

Send for bulletin. See your nearest industrial distributor . . . The Aro Equipment Corp., Bryan, Ohio.

Mention Item NED-6481 when writing

SLIPS DO COUNT. About 20% of all compensation claims result from accidents on slippery floors.

You can stop this cause of painful, costly injuries, of lost man-hours and lowered production by a simple and inexpensive application of Ferrox.

Simply trowel this plastic-abrasive composition on potential danger spots—ramps, walkways, platforms, washroom floors, wood, concrete or metal—and you have underfoot safety. Ferrox has proved the general purpose safety floor-maintenance material—safe indoors or outdoors—wet, dry or oily. One gallon covers 40 square feet.

Take a walk around your plant now and let your feet tell you where Ferrox can save you both time and money. Send your trial order today: $7.50 per gallon in 1-gallon cans; $7.25 per gallon in 5-gallon cans.

AMERICAN ABRASIVE METALS CO. 460 Coit Street Irvington 11, N. J.

Mention Item NED-6482 when writing

Severance DEBURRING CUTTERS HIGH SPEED CARBIDE

Unexcelled for power and hand deburring
Sectional pattern teeth give shearing action

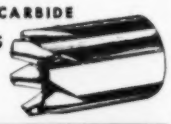
Severance INSIDE DEBURRING CUTTERS
GROUND-from-the-solid

Select 45° High Speed cutters from 28 standard sizes and 30° cutters from 35 sizes—from 1/4" to 3" diameters.
45° 30°
Both angles can be supplied in CARBIDE

Severance OUTSIDE DEBURRING CUTTERS
GROUND-from-the-solid

For speedy light deburring of rod ends and tubing O. D's., either offhand or in screw machines. Select 30° cutters from 14 standard sizes and 45° cutters from 10 sizes—up to 4 inch diameter.
ANGLES 30° & 45° C/L
Both angles can be supplied in CARBIDE

OUTSIDE CHAMFERING MILLS



Operate in machines to perform heavy chamfering without chatter—in above size range and angles.

HEADQUARTERS FOR DEBURRING AND CHAMFERING TOOLS DEVOID OF CHATTER

Severance HAND DEBURRING CUTTERS

"A Twist of the wrist" easily bites off the bur left by drill or punch.
Ten standard sizes for 1/4 to 2" diameters.
Write for Bulletin 16-D

Complete REGRINDING Service — by New Tool Craftsmen — Savings are thus multiplied —

SEVERANCE TOOL INDUSTRIES, Inc.
761 Iowa Ave. Saginaw, Michigan

Mention Item NED-6483 when writing

ALUMINUM PIPE FITTINGS permit fast economical installation

Three basic Nu-Rail pipe fittings plus modified cross, floor flange, wall flange and end plug permit assembling of 14 different arrangements to erect wide variety of pipe structures. Since no pipe threading or welding are required, installation time is reduced to minimum. Slip-on feature of fittings permits free passage of pipe which is firmly engaged by two hollow point set screws recessed into each reinforcing rib. When combined with aluminum pipe, fittings can be used to construct deck, hand, stair and guard rails; portable scaffolds; hand trucks; work benches, partitions and similar structures. Made by **Reynolds Metals Co.**, Aluminum Div., 2552 S. Third St., Louisville 1, Ky.

Mention Item NED-6484 when writing

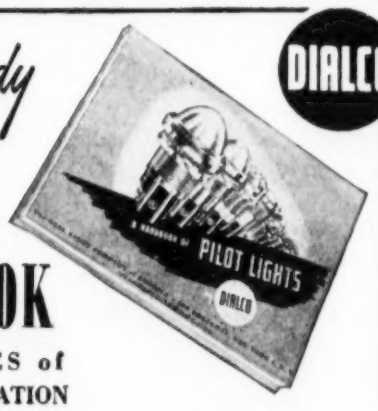
ADDRESSING MACHINE imprints mailing pieces from list typed on roll of special paper

Operating on spirit principle of reproduction which requires no stencils, plates, ribbon or ink, model A-2 Weber addressing machine embodies several design improvements. Addresses are transferred to mailing piece from list typed on roll of special paper. Original list can be used up to 100 times. Corrections and changes are made by means of gummed stickers which are supplied. Equipping machine with automatic ejector eliminates necessity of manually removing addressed piece, increases efficiency and results in production of from 2000 to 2500 addressed pieces per hour.

Improvements in moistening device include redesigned fluid reservoir and three-way fluid control adjustment by means of which flow of liquid can be governed to suit character of paper stock being used. Housing is of one-piece cast aluminum. Polished feed table is integral with base and fitted with adjustable guide which permits addressing of all types of mailing pieces in wide range of sizes. Pressure bar is of transparent plastic so that names and addresses are always visible. Unit lists at $47.50, complete with all supplies needed for 500-name mailing list. Made by **Weber Addressing Machine Co.**, 202 W. Central Rd., Mt. Prospect, Ill.

Mention Item NED-6485 when writing

Now Ready DIALCO



The NEW HANDBOOK

. . . 192 PAGES of USEFUL INFORMATION

Engineers, designers, purchasing agents—

GET YOUR COPY

You will find complete data on the lamps used in pilot lights.

And illustrations—all full size—of hundreds of items you will use.

There is a table of resistors for operation of lamps on all voltages.

Complete dimensional data on each unit.

More than 2,000 Underwriters' Listed Assemblies.

The DIAL LIGHT COMPANY of AMERICA
Foremost Manufacturer of Pilot Lights
900 BROADWAY, NEW YORK 3, N. Y. TELEPHONE SPRING 7-1300

Write for Handbook B-149

Mention Item NED-6486 when writing

Machines "THRIVE" on MULTI-PURPOSE Anti-Scoring LUBRICANT

Highly concentrated. Withstands pressures greater than 50,000 lbs. per sq. in. Free of lead and graphite. Non-corrosive. Originated by CMD. ACCEPT NO SUBSTITUTES.

15 DROPS Keep A Lathe Humming

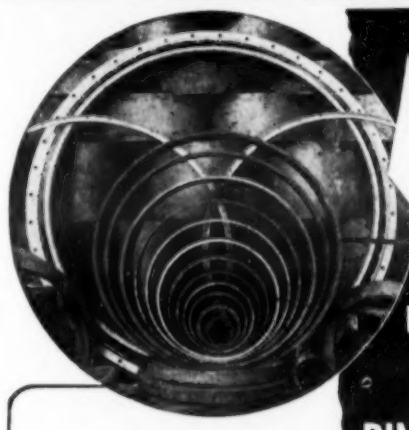
1. Dead or live centers
2. Follow Rest
3. Steady Rest
4. Tool Post Screw
5. Lead Screw
6. Wipers
7. Head Stock Bearings
8. Half Nut
9. Quick-Change Gear Box
10. All Apron Gears
11. Chucks
12. Tail Stock Screw
13. Tail Spindle Lock
14. Taper Attachment
15. Knurling Operation

CMD Lubricants are available as oil or grease. Packed in 4 oz. tubes, cans (gallon, 5 gallons) and 55 gallon drums.

Write for FREE SAMPLE Tubes of CMD Multi-Purpose, Anti-Scoring Lubricants now! Address Dept. 9-NED.

CHICAGO MANUFACTURING & DISTRIBUTING CO.
1928 W. 46th STREET CHICAGO 9, ILLINOIS

Mention Item NED-6487 when writing



YOU WILL CUT COSTS.. SPECIFY!

FLASH-BUTT WELDED RINGS & BANDS by AMERICAN WELDING

• Make better products more profitably by cutting your production costs with American Welding Flash-Butt Welded Rings and Bands.

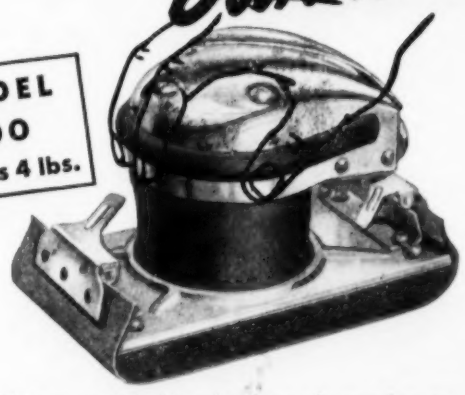
Our "Controlled Technique" is your assurance of top quality and low cost. Both ferrous and non-ferrous metals in standard shapes or special mill sections are easily adapted to American Welding know-how and craftsmanship. Send us your prints, specifications and quantities for prompt quotations.

THE AMERICAN WELDING AND MANUFACTURING CO.
170 DIETZ ROAD • WARREN, OHIO

Mention Item NED-6488 when writing

NATIONAL *Sanders*

MODEL 400 Weighs 4 lbs.



THIS powerful vibrationless air sander operates at 4000 to 6000 r.p.m. — has an abrasive area of 25 sq. inches — and an orbital action, making a 3/16" circular pad stroke. The high speed Model 400 leaves a perfectly smooth surface, often times making filler coats unnecessary and so saving time and money. Write for details today on the versatile, handy National Model 400 Air Sander.

Powerful . . . Vibrationless . . . Light Weight

NATIONAL AIR SANDER, INC. ROCKFORD ILLINOIS

Mention Item NED-6489 when writing

INFRARED
gives quick, economical heat

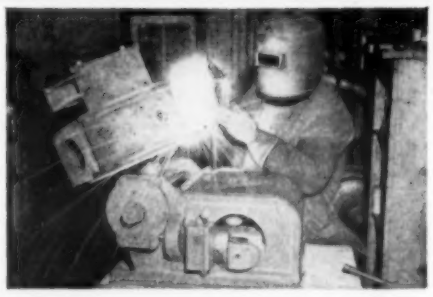
IN big ovens or small portable equipment, G-E infrared lamps provide quick, clean, economical heat that solves a multitude of drying and baking jobs. General Electric makes all types of infrared lamps—from 125 to 1,000 watts. For complete information, get your free copy of Folder Y-689. Write General Electric, Nela Park, Div. 166-NED 9-49, Cleveland 12, Ohio.

G-E LAMPS

GENERAL ELECTRIC

▲ Mention Item NED-6490 when writing ▲

MORE WELDS -LESS TIME



with Worthington-Ransome Positioners

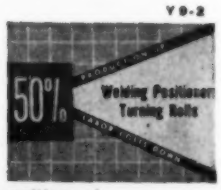
Your welder gets more arc time out of each working hour when the work is positioned for economical "downhand" welding. He can use heavier electrodes, too, for better welds.

Capacities from 100 lb to 20 tons. Also: Turning Rolls from 3 to 75 tons, stationary and self-propelled.

Write for Bulletin 210C Worthington Pump and Machinery Corporation, Welding and Assembly Positioning Equipment Division, Dunellen, N. J.

WORTHINGTON

WORTHINGTON-RANSOME WELDING POSITIONER



▲ Mention Item NED-6491 when writing ▲

A MORE EFFICIENT SYSTEM FOR MATERIALS HANDLING

DEMPSTER DUMPSTER

Regardless of the type of materials you handle, the Dempster-Dumpster System of one truck, equipped with a Dempster-Dumpster hoisting unit, handling an unlimited number of bodies does the job quicker, easier and with great savings in gas, oil, manpower and investment. Standard or special bodies in capacities from 1½ to 10 cu. yds. are placed at loading points, picked up when loaded, hauled and dumped with the entire operation handled by one man from hydraulic controls in cab. No wasted time for truck or driver. Pictured installation shows steps in handling tank body built for handling liquids. The comparatively low cost of installing this system will surprise you. Write for catalog 245 now.

DEMPSTER BROTHERS, Inc.
4118 N. Knox St., Knoxville 17, Tenn.

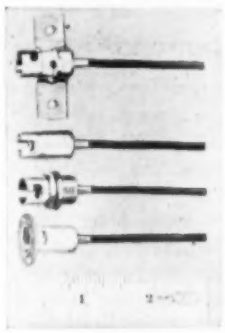
▲ Mention Item NED-6492 when writing ▲

DRILL CABINET
individual compartments with rounded bottoms hold complete stock

Capable of holding several dozen drills in smaller sizes, this drill dispenser has permanent raised letters and numbers on drawer fronts for ease of reading and selection. Unit has built-in pricing or inventory system which eliminates need for cost sheets or will keep record of drills on hand. All drawers are mounted on free-sliding compound rails and have positive drawer stops. Cabinet is supplied in three sizes: model No. 1 has three drawers for fractional drills 1/16 to ½-in. in steps of 1/64-in.; model No. 2 has five drawers for number drills 1 through 60; and model No. 3 has three drawers for letter drills A to Z. All sizes measure 14½ x 7¼ x 7¼ in. Dispenser is finished in hammerlin baked gray enamel with plastic drawer pulls. Made by **Huot Mfg. Co.**, 552 N. Wheeler St., St. Paul 4, Minn.

▲ Mention Item NED-6493 when writing ▲

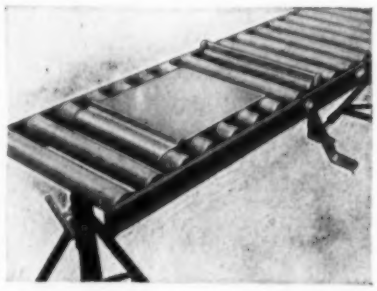
MINIATURE SOCKETS
of bayonet type for heavy duty use



These miniature bayonet sockets are heavy-duty units constructed for use in precision instruments and other equipment where sturdy socket is needed. They can be used in any product where there is need for pilot light such as appliances; safety switches; control panels; coin-operated machines; dial, pilot or night lights; heaters; indicators; locators; testers; office machines and temperature controls. Constructed of brass tubing, sockets can be furnished with lead wire of any length or type. They can be supplied with square mounting bracket, threaded with two hexagonal nuts for panel mounting, with side ears or single or double cleats, or with variety of other mountings. Made by **Frank W. Morse Co.**, 1300A Soldiers Field Rd., Boston, Mass.

▲ Mention Item NED-6494 when writing ▲

CASE STOPS
for use on conveyor equipment

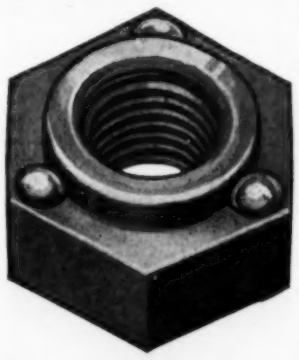


Stop shown at left of illustration is metal snap-on stop that can be introduced quickly into conveyor line or removed by snapping spring edges over rollers or wheels. Mechanically operated stop shown at right is for permanent installation and is operated by lever. When not in use, rod disappears below bearing surface of conveyor and nests between rollers or lines of wheels. Both these stops will fit any Metzgar equipment now in use as well as other conveyors of standard dimensions. Made by **Metzgar Co.**, 416 Douglas St., Grand Rapids 4, Mich.

▲ Mention Item NED-6495 when writing ▲

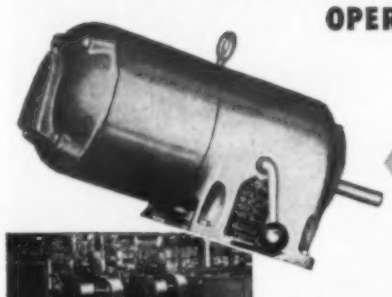
PROJECTION WELD NUT
collar automatically centers nut

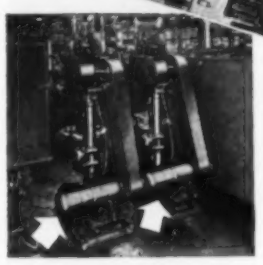
Designed for speed and ease of positioning or centering at spot where it is to be welded to metal, Gripco Pilot projection weld nut has circular collar with outside diameter slightly less than bolt hole. Operator inserts collar into hole which centers nut accurately for welding operation. Where application is difficult due to restricted space or where metal sections are too thin to thread, application process is reversed, nuts being welded into final position and bolt screwed into nut. They are also attached to bulky or heavy products so they can be bolted against shifting in transit. Nuts are furnished with common nut threads or with Gripco Double-Triangle thread-locking feature, which locks bolt to nut. Made by **Grip Nut Co.**, 308-G S. Michigan Ave., Chicago 4, Ill.



▲ Mention Item NED-6496 when writing ▲

HERE IS THE ANSWER TO INCREASING PRODUCTION WHILE LOWERING OPERATING COSTS





Above view shows Lima Drives applied to two Garvin Automatic Tappers. Photo courtesy International Harvester Company.

LIMA GEARSHIFT DRIVES have very definitely proven themselves to be the answer to lower operating costs and greater flexibility of machine operations. LIMA GEARSHIFT DRIVES are widely accepted by manufacturers of original equipment, as an integral "selective-speed" power source.

LIMA DRIVES are available for operation on single phase power supplies in ½ and ¾ hp sizes and for polyphase in sizes from ½ to 25 hp.

LIMA'S New Illustrated Drive Bulletin DB-1 is just off the press—send for your copy today.

LIMA

Representation in principal cities
THE LIMA ELECTRIC MOTOR COMPANY
315 FINDLAY RD. • LIMA, OHIO

▲ Mention Item NED-6497 when writing ▲

New 36-page "Fiberglas* Glass-base Electrical Insulating Materials" manual is just off the press. Contains performance charts, graphs, photographs and descriptive material on the complete line, including: Tape, Varnished Cloth, Saturated Sleeving, Cloth, Laminates, Mica Combinations and Wire and Cable Insulations.

If you manufacture, design, use, repair or sell electrical equipment you need this new manual. Features selection factors—suggested uses—and other pertinent information that will help you determine the best Fiberglas-base material for a specific job.

This booklet, describing the unique combination of characteristics of Fiberglas-base materials, is *free*.

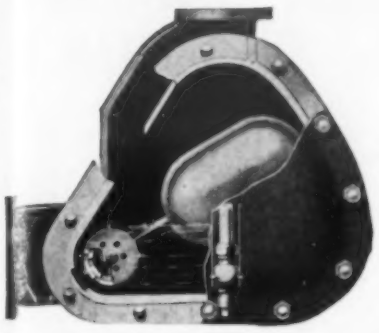
See why the use of this inorganic-base insulating material is increasing so rapidly—why so many designers, manufacturers and repair shop operators specify it. Write for your copy today: Owens-Corning Fiberglas Corporation, Textile Products Division, Dept. 921, 16 E. 56th Street, New York 22, N. Y.

OWENS-CORNING **FIBERGLAS** ELECTRICAL INSULATING MATERIALS

*Fiberglas is the trade-mark (Reg. U.S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.

▲ Mention Item NED-6498 when writing ▲

The MULTIPORT DRAINER
(Continuous Flow Steam Trap)



Multiple Port Construction
•
Enormous Discharge Capacity
•
Continuous Discharge
•
Instant Response

with the Balanced Rotary Valve

COCHRANE DRAINERS are famous among power plant operators for their tremendous discharge capacity. They are specified whenever large quantities of condensate must be continuously removed, as from evaporators, heaters, separators, coils or steam lines, under vacuum or positive pressure. The secret of their enormous capacity lies in their multiple port construction, a series of longitudinal ports in the rotary valve matching similar ports in the stationary valve sleeve. The height of the condensate in the drainer body thus automatically determines the rate of discharge.

Write for a copy of Publication 2925.

COCHRANE CORPORATION
3143 N. 17th Street Philadelphia 32, Pa.

COCHRANE
SINCE 1863

Mention Item NED-6499 when writing

WANT A FASTER CUTTING, LONGER LASTING BLADE? STAR *MAKES IT!*

No matter what type material you're cutting... metal, or non-metallic... you'll find Star blades cut it cleaner, faster... give longer, more economical service. That's because Star blades are made of the finest high grade steel, heat treated for extra blade strength. Teeth are precision-set to assure fast cutting and full side clearance. These Star features mean fewer "time-outs" on the job... greater cutting economy for you. And the Star line is *complete*. There's a Star blade designed for every cutting job a hack saw or band saw can do.

Next time your supplier calls ask him for a free copy of Star's booklet, "Metal Cutting", and the new Star Wall Chart. Both are packed full of valuable information on the selection, use and care of hack saw equipment.

5707

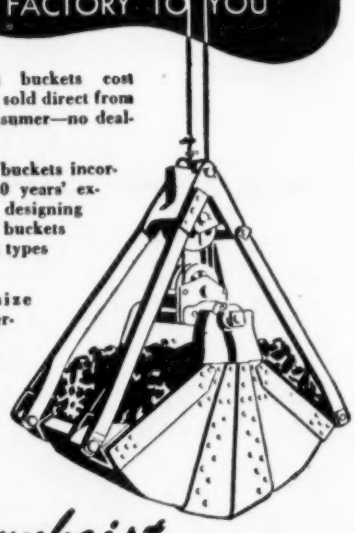
CLEMSON BROS., INC.
MIDDLETOWN, NEW YORK
Makers of hand and power hack saw blades, frames, metal cutting band saw blades and the Clemson Lawn Machine.

Mention Item NED-6500 when writing

Buy a Better Bucket FOR LESS MONEY *Buy Brownhoist*

DIRECT FROM FACTORY TO YOU

- Brownhoist buckets cost less—they are sold direct from factory to consumer—no dealer profits.
- Brownhoist buckets incorporate over 50 years' experience in designing and building buckets for handling all types of materials.
- Standard size rope-reeve, power-wheel and link-type Brownhoist buckets are available for immediate shipment.

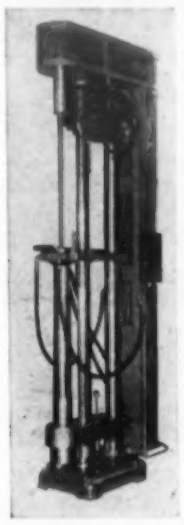


Brownhoist

Write for illustrated catalog of Brownhoist Buckets
INDUSTRIAL BROWNHOIST CORPORATION
139 Washington Ave., Bay City, Michigan

Mention Item NED-6501 when writing

SURFACE HARDENING FEEDER used with high frequency heaters

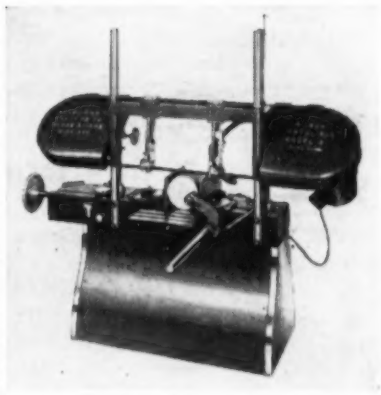


Shafts, bars, lead screws and fabricated parts up to 5 ft in length and 3 in. outside diameter are handled by this P 60 progressive feed unit with use of relatively low-power high frequency heating equipment. It can be used for continuous hardening of entire lengths or selected areas of work piece, or for progressively soldering or brazing seams and joints. Depth of hardness is controllable by regulating speed of travel of work coil.

Machine accommodates shaft or part in vertical position between lathe-type spindles or chucks. High frequency heating coils and quenching equipment travel upward along axis of part; heating cycle is controlled automatically. Hydraulic variable speed drive controls speed of ascent and descent of quench ring assembly. Speed may be varied between 0 and 1.2 in. per second of vertical travel; workpiece can remain fixed or rotate at any speed from 24 to 78 rpm. Quenching is accomplished by water spray at normal city water pressure which is directed on part immediately behind heating coils by quench ring containing hundreds of small jets. Unit operates on standard 3-phase power supply and can be continuously operated either automatically or by footswitch. Made by **Lepel High Frequency Laboratories, Inc.**, 39 W. 60th St., New York 23, N. Y.

Mention Item NED-6502 when writing

METAL-CUTTING BAND SAW has hydraulic control and 9 x 18-in. capacity for most cutting operations



Featuring 20-in. clearance under saw blade and quick-acting vise which swivels 45 degrees in either direction, model M band saw accomplishes most types of metal cutting operations. Blade guide with single screw adjustment allows rotating of blade and adjustable stock stop automatically moves out and up at completion of cut to eliminate binding of stock on blade. When cut is completed, machine will stop at selected height or may be set for repeating cycle. All rotating parts operate on ball bearings, and rotating blade brush cleans chips from sides and between teeth. Cutting head is of one-piece welded construction. Removable cooling system is available as optional equipment, along with stock stand, rotary base for cutting angles and automatic vise control for use where duplicate cuts are made. Made by **W. F. Wells & Sons**, North on 131 R2, Three Rivers, Mich.

Mention Item NED-6503 when writing

PRACTICAL, PRECISION-MADE
POCKET MICROSCOPE
Model S-129

ACTUAL SIZE
5 in. x 3/4 in.

easy to use . . . *anywhere*

A handy, versatile instrument built to rigid inspection standards, the S-129 Pocket Microscope is a valuable aid in the shop, in the laboratory, in the field . . . wherever critical examinations are desired. Sturdy, compact design permits quick on-the-spot quality checks under all conditions, often where such inspections are otherwise impossible.

Covering the useful 40 to 60-power range, the S-129 microscope is ideal for examining metal surfaces and finishes, sands and grits, chemical crystals, molding materials, cutting tools and small machined and threaded sections.

Features include micrometer fine-focus ring, Huygens eyepiece, achromatic objective, integral steady rest and reflector, draw-tube selection of magnification, satin-chrome finish. BUHL S-129 POCKET MICROSCOPE, with leather case—$18.50.

Make this 5-day on-the-job test!

Order the S-129 Pocket Microscope *now* and try it for five days. A fair trial will show you how it fits into *your* inspection set-up at no cost to you. Satisfaction guaranteed.

BUHL OPTICAL COMPANY
DESK T-102 • 1009 BEECH AVE.
PITTSBURGH 12, PA.

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GIVES FULL DETAILS ON COMPLETE LINE OF **Hanna** VALVES

SEND FOR YOUR COPY

YOU NEED VALVES? What kind, which size, for what type application? You'll find all the answers in the new Hanna 16-page Valve Catalog. It includes illustrations, descriptions, design and operation features and specifications on Hanna's complete line. New Pilot and Mastair Valves are shown for the first time.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1765 Elston Avenue, Chicago 22, Illinois

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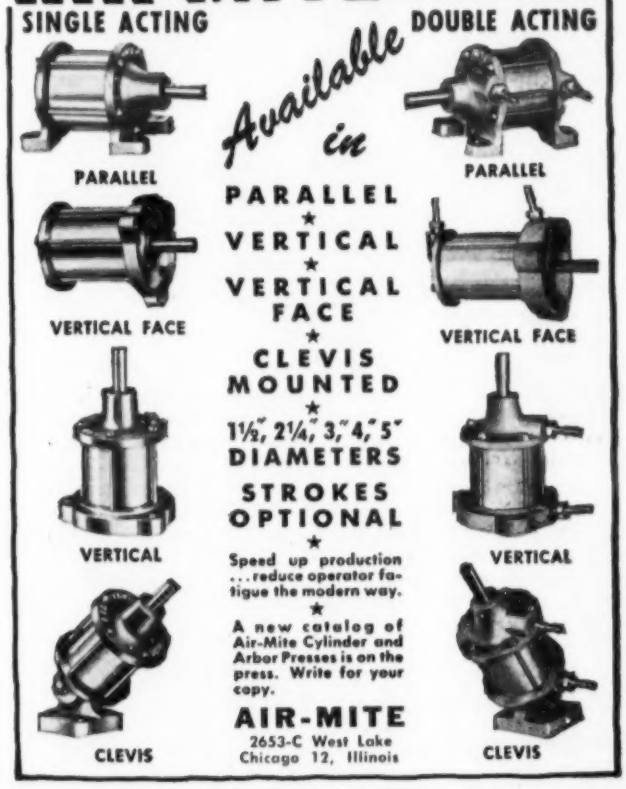
AIR-MITE AIR CYLINDERS

SINGLE ACTING — DOUBLE ACTING



Available in

PARALLEL ★ VERTICAL ★ VERTICAL FACE ★ CLEVIS MOUNTED ★ 1½", 2¼", 3", 4", 5" DIAMETERS ★ STROKES OPTIONAL ★

Speed up production . . . reduce operator fatigue the modern way. ★ A new catalog of Air-Mite Cylinder and Arbor Presses is on the press. Write for your copy.

AIR-MITE
2653-C West Lake
Chicago 12, Illinois

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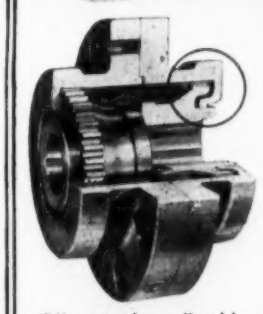
HOW FAST'S *Couplings Deliver* UNINTERRUPTED POWER!



Oil-protecting "rocking bearing" allows *freedom of movement* to compensate for misalignment because *spherical* base has same *axis* as hub spline faces.

You'll get *uninterrupted* service from Fast's Couplings because they are made *without perishable materials of any kind.* Nothing to wear, nothing to replace! Exclusive "rocking bearing" guards load-carrying oil from dust, moisture. When you buy Fast's, you get years of top engineering experience, Koppers' high standard of workmanship, unexcelled coupling service. *Specify* Fast's, the *original* gear-type coupling.

Koppers Co., Inc., Fast's Coupling Dept., 289 Scott St., Baltimore 3, Md.

KOPPERS **FAST'S** *Self-Aligning* **COUPLINGS**

WRITE FOR FREE CATALOG NOW!

Mention Item NED-6507 when writing

DETECTO SCALES

There's a precision-accurate Detecto Scale for your specific weighing and counting need. The Detecto helps increase production, yet assures you maximum accuracy by making slightest weight discrepancies immediately visible.

DETECTO-GRAM RATIO COUNTING SCALE

Another Detecto-Gram Scale to speed counting operations. Model #1743 has a special counting tray attached to the beam for use when counting in odd amounts.

Write for Literature

DETECTO · SCALES · INC.
MAKERS OF FINE SCALES SINCE 1900
549 N. PARK AVENUE · BROOKLYN 5, N. Y.
SCALE ENGINEERS IN ALL PRINCIPAL CITIES

Mention Item NED-6509 when writing

EXPAND YOUR HOT WATER SUPPLY *Economically*

- NO TANK!
- NO EXCAVATING!
- NO COMPLICATED PIPING!

● *The Economy* as well as the efficiency of General Instantaneous Water Heaters is an important reason why so many are now in service. Economical to install. Economical to operate and maintain. Economical in space. Easily tapped into pipe lines at strategic spots, or as boosters on storage tank systems.

These General Water Heaters for Plant washrooms or Industrial processes are available in 12 sizes—capacities, 6 to 270 gallons per minute. Supply piping-hot water through seamless copper tubing. Write for Catalog 17. General Fittings Co., Dept. I, 123 Georgia Avenue, Providence 5, Rhode Island.

GENERAL
TANKLESS AND INDIRECT WATER HEATERS AND HEATING SPECIALTIES

Mention Item NED-6510 when writing

FOOT OPERATED CONTROL VALVES

For better, faster production...

● Ideally used with shears, presses, forging machines and other machinery of all kinds because the operator has both hands free to handle the work. The U-shaped packers are expanded by pressure and seal tightly. All parts are in pressure balance avoiding any tendency to creep or crawl. There is no lapping—no grinding—no metal-to-metal seating. 3/8"; 1/2"; 3/4" and 1" sizes. 3-way neutral position or regular actions.

Write for complete specifications—Today!

For maximum efficiency—and satisfaction—specify
Quick-As-Wink
AIR AND HYDRAULIC CONTROL VALVES
Mfd. by C. B. HUNT & SON, INC., *Salem, Ohio*
ENGINEERING AND SALES REPRESENTATIVES IN THE PRINCIPAL CITIES

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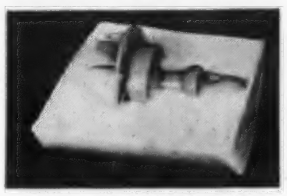
NEW *Processes* AND *Materials*

PRECISION CASTINGS
parts produced to specification



Parts as small as 0.033-in. equivalent to No. 66 drill size can be produced in almost any metal by lost wax investment method of precision casting. Dimensions within 0.002 are commonplace; occasional dimensions are held to 0.0005 depending on design complication of piece to be cast. Castings are produced from such metals as brass, aluminum, beryllium, copper, beryllium nickel, magnesium and steels of various specifications. Nearly every metal has been cast, with exception of tungsten carbide. Method is particularly economical where considerable machine work may otherwise be involved in production of part. Made by **Precision Metalsmiths, Inc.**, 9102 Roselawn Ave., Detroit 4, Mich.

Mention Item NED-6512 when writing

FINISH COATING
suitable for machines and tools

Made especially for wrenches and other cast-iron, steel or aluminum tools and machines, Dulac L-433 dull black lacquer enamel produces extremely tough coating that hides surface flaws and imperfections in metal. It can be applied either by spray or dip method and air-dries. Made by **Maas & Waldstein Co.**, 438 Riverside Ave., Newark 4, N. J.

Mention Item NED-6513 when writing

PACKING EXPANDER
supplied in strip form for easy use

Produced in numerous heights and of rolled brass strip material, U-type packing expander can be cut off at length required to fit many diameters of packings on hydraulic equipment. It adequately and evenly supports packing by maintaining uniform pressure on both ram and inside wall of recess by pressure which it creates on side walls of packing. It also keeps lips of packing against surface of plunger so that pressure will properly enter recess of U and valve lips to effect seal. Made by **HPL Mfg. Co.**, 2015 E. 65th St., Cleveland 13, O.

Mention Item NED-6514 when writing

Call us for personal on-the-spot attention to your special machine needs

SLITTERS • COILERS
SCRAP BALLERS

PAXSON · SALEM, OHIO

Mention Item NED-6515 when writing

WIPE WELD SPATTER CLEAN

1. Brush or spray Protect-O-Metal in weld seam and an adjacent metal.
2. Weld
3. Simply wipe off spatter with a dry cloth.

Save Up To 85% of Weld Cleaning Labor

Unretouched photo shows how quick weld spatter "comes clean" when you paint or spray Protect-O-Metal No. 2 before welding. Spatter comes off in a *fraction of the time* and for a *fraction of the expense* of ordinary methods. No profit-wasting work with air chisels, wire brushing, or sand blasting. Get smooth, clean surfaces ready for painting if necessary . . . Unlike all other "spatter-proofing" compounds, Protect-O-Metal No. 2 contains no oils or organic ingredients, will not cause smoke, fumes, or odors. One coat serves for single or multi-pass welds, costs about a tenth of a cent per foot of weld, *saves up to three times its cost in time savings alone.*

PROTECT-O-METAL No. 2

G. W. Smith & Sons, Inc.
5402 Kemp Road, Dayton 2, Ohio

ORDER A TRIAL GALLON ($3.15) for testing in your plant. Your money back if compound does not prove entirely satisfactory.

Mention Item NED-6516 when writing

RESTORES damaged... rusty... flat... battered THREADS

• No need to saw off a damaged bolt or remove a corroded stud. No expensive replacements or hand clean-up. Just a few twists of your Buckingham Thread Cleaner and threads are smoothed up, free-running—*restored.*

Works on any thread, right or left-hand; *even tapered pipe threads. . .*because the cutting blades adjust to wide range of root diameters. Correctly follows any pitch—no need to insert or change dies. Ideal for removing deposits or corrosive agents while dismantling and reassembling jobs of various kinds.

NOW in 3 Sizes

No.	Weight	Root Diam.	Price
6103	1 lb.	1/4" to 1"	$ 6.30
6104	2 1/2 lbs.	1" to 2-9/16"	13.00
6106	7 lbs.	2" to 4"	35.00

Over 800 authorized dealers—see the one nearest you—or write us for further information about this mighty useful, time-saving tool.

BUCKINGHAM MANUFACTURING CO., INC.
65-67 Travis Street Binghamton, N. Y.

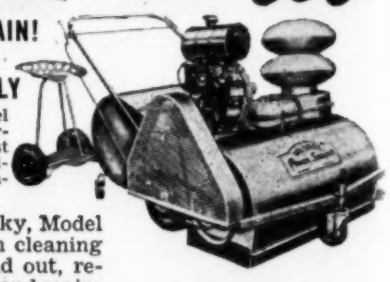
Mention Item NED-6517 when writing

SAVE MONEY and Manpower with Wilshire POWER SWEEPER

MODEL 500

SAVES ITS COST OVER AND OVER AGAIN! CLEAN SAFELY AND ECONOMICALLY

with the Wilshire Model 500...its exclusive filtering system deposits dust in specially designed bellows bag that requires infrequent emptying.



With or without sulky, Model 500 does a thorough cleaning job both indoors and out, reduces cleaning time and maintenance costs 90%. All safety devices for indoor operation—sweeps right up to machinery and walls without scraping or marring—keeps floors free of nails...chips...shavings...and other debris.

Factory-Tested 90-Day Guarantee

Also available: Model 150, same as Model 500 except for vacuum attachment.

FREE! ON-THE-JOB DEMONSTRATION
WRITE TODAY FOR NAME OF NEAREST DISTRIBUTOR

FEATURES

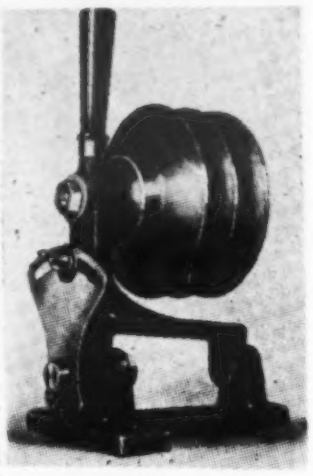
- 3 h.p. 4-cycle gas motor, air-cooled
- One-piece aluminum frame
- 27", 36", 48" sweeper widths
- Finger-tip dual control
- Specially designed brush assembly
- Full floating ball bearing equipped shaft

Wilshire POWER SWEEPER CO.
4615 ALGER STREET
LOS ANGELES 26, CALIF.

SWEEPING THE COUNTRY SINCE 1940

Mention Item NED-6518 when writing

VARIABLE SPEED CONTROL



Variable speed control of V belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H. P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Advt.**

▲ Mention Item **NED-6519** when writing ▲

ANNOUNCEMENT

A new line of Oster

"Pipe Master"

portable pipe threading machines includes two De Luxe models (Nos. 522 and 552) of aluminum alloy construction and two Standard models (Nos. 502 and 532) of steel construction. (Although engineered for extra rigidity and durability, the two De Luxe models have less carrying weight, due to their aluminum alloy construction.)

In the No. 522 De Luxe and the No. 502 Standard machines the work turns in the stationary die-head.

In the No. 552 De Luxe ROTARY and the No. 532 Standard ROTARY, the dies turn and the work is held in the vise. This principle makes it possible to thread BENT or straight lengths of pipe or other stock.

Standard range of all four machines is ¼" to 2" pipe with extra range of ⅛" pipe. Nos. 522 and 502 have extended range with drive shaft from 2½" to 8" inclusive.

New and advanced features of these machines establish higher standards of threading performance with resultant lower unit costs.

Complete information is available in a new, illustrated booklet. Ask for "The Pipe Master Catalog".

THE OSTER MANUFACTURING COMPANY
2066 East 61st St. • Cleveland 3, Ohio, U. S. A.

▲ Mention Item **NED-6520** when writing ▲

SANITATION AT A SAVING

LP-20
Available in Black or White

OPEN FRONT AND BACK DESIGN... means quicker, easier cleaning. Cuts upkeep to a minimum. No germ-collecting crevices, always sanitary.

SELF-RAISING... Seat remains upright when not in use with bowl serving as urinal. Seat stays clean and dry.

SOLID PLASTIC... Shatter-proof, fire-proof. Plastic covered hinge is dirt free, moisture proof. Assures long life, low maintenance.

WRITE NOW for full details on Model LP-20 (illus.), Model LP-40 with self-sustaining hinge, and a complete line of conventional models. DEPT. NE

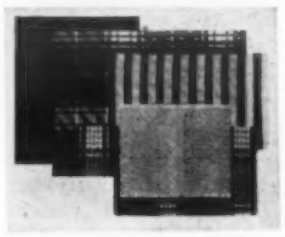
SPERZEL
123 14th Avenue South
Minneapolis, Minnesota

All Sperzel Seats Fit Standard Bowls

▲ Mention Item **NED-6521** when writing ▲

New Processes & Materials

PLASTIC FABRIC
remains pliable even in extreme cold



Developed for seat covering market, Reevon is fabricated from monofilaments of Bakelite polyethylene resin and is suitable for applications in automobiles, busses, trains, offices, hotels and outdoor furniture. It is nontoxic; is resistant to moisture, acids, stains and vermin; and will float in water. Fabric resists scuffing and snagging and can be cleaned with soap and water. Made by **Reeves Brothers, Inc.,** 52 Worth St., New York 13, N. Y.

▲ Mention Item **NED-6522** when writing ▲

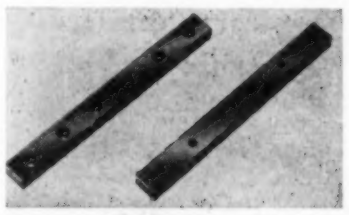
HEAT-TRANSFER FLUIDS
resist sludging and coking in range of 60 to 500° F

Made from polyalkylene glycols and derivatives, Ucon fluids are useful as heat-transfer liquids. Available in water-soluble and water-insoluble types, they are characterized by low pour points and exhibit little change in viscosity with temperature change. They have little effect on various types of rubber and packings.

Formulated especially for high temperature applications is water-soluble 50-HB-280-X fluid which has viscosity of 280 Saybolt seconds universal at 100° F. It can be used in rubber and plastic extrusion equipment as well as constant temperature baths. It has solvent effect on sludges and varnishes caused by petroleum oils, and in some cases has removed coke deposits on electric heaters and other surfaces. Being water-soluble, it can be removed from immersion heaters and other parts of heat-transfer units by cold water flushing. Made by **Carbide & Carbon Chemicals Corp.,** 30 E. 42nd St., New York 17, N. Y.

▲ Mention Item **NED-6523** when writing ▲

WEAR STRIPS
for boring bars and driving tools

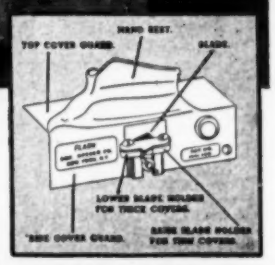


Intended for use on tools piloted in bushings, aluminum-bronze wear strips practically eliminate seizing and galling caused by high speeds, heavy loads and adverse operating conditions. They have low coefficient of friction and good heat conductivity. Dissimilarity of material permits small clearances between steel bushing and strips, thus assuring adequate rigidity for accurate cutting operations and confining major wear to strips. Wiping action of strips keeps chips and dust particles away from mating surfaces of bushing and bar. Strips are available in 6-in. lengths and five standard widths from ⅜ to 1 in. Made by **Scully-Jones & Co.,** 1952 S. Rockwell St., Chicago, Ill.

▲ Mention Item **NED-6524** when writing ▲

Amazing
FLASH BOX OPENER
Opens Any Carton Quicker . . . Cleaner

Exclusive patented blade holder adjustable to varying thicknesses of carton covers.



THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. ***Already accepted by leading industries.***

Retail Price
$1.75

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

▲ Mention Item **NED-6525** when writing ▲

BRIDGEPORT
Bellows . . . Bellows Assemblies

Where a bellows or bellows device is the answer to your problems, Bridgeport can design and produce *exactly* what you need. Bridgeport bellows and bellows assemblies are made on order—made to help your product perform as *you* want it. Wide range of sizes and metals. Prompt service. Send for fact-full Catalog RZ-100 today.

Bellows Assemblies . . . Bellows . . . Bellows Devices

BRIDGEPORT THERMOSTAT
Division
ROBERTSHAW-FULTON CONTROLS CO., BRIDGEPORT 1, CONN.

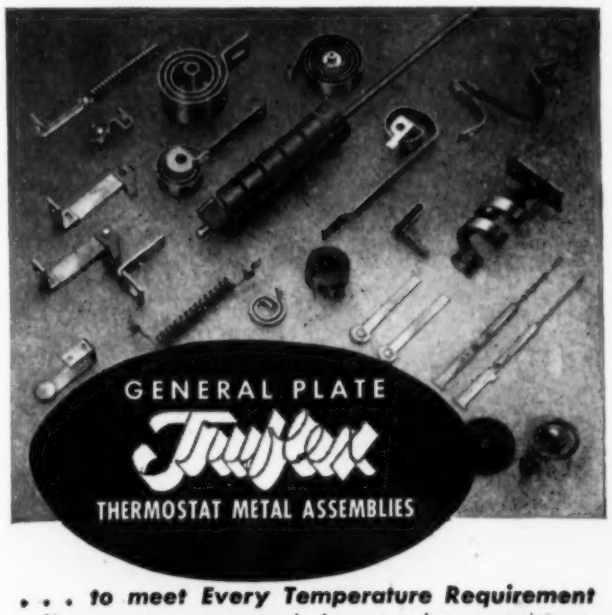
▲ Mention Item **NED-6526** when writing ▲

FOR SAFE FOOTING

This one-piece electroforged steel "material" is furnished to your specifications—cut to fit any shape or area. Installation is quick and sure—requiring only simple clips supplied with order . . . Safe footing at all times is assured by twisted cross bars . . . Admits maximum amount of light and air . . . Only maintenance is an occasional coat of paint . . . For safety's sake, mark your grating specs—"Blaw-Knox".

BLAW-KNOX DIVISION
of Blaw-Knox Company
2068 Farmers Bank Bldg.
Pittsburgh 22, Pa.

▲ Mention Item **NED-6527** when writing ▲



. . . to meet Every Temperature Requirement

If you want to cut costs and get reliable automatic temperature control on practically any type of product, use General Plate Fabricated Truflex Thermostat Metal Assemblies.

You save money because General Plate fabricates, according to your specifications, complete units which are shipped to you ready for instant application.

You get reliable performance because every order is consistently uniform in tolerances, temperature reaction and performance, thus preventing rejects and costly adjustments in assembly.

General Plate Truflex Thermostat Metal Assemblies will be made to meet your specification requirements for temperature range, electrical resistance, corrosion resistance, etc. However, if you prefer to make your own assemblies, we will produce strip or coils to your specifications. Write for information or engineering assistance.

GENERAL PLATE
Division of Metals and Controls Corporation
809 FOREST STREET, ATTLEBORO, MASSACHUSETTS

▲ Mention Item **NED-6528** when writing ▲

Anti-Corrosive
STAINLESS STEEL FASTENINGS
DO THE JOB Better

When You Come to Fastenings, Be Sure You're Right by Specifying Stainless!

Stainless fastenings are a *must* in today's industrial design, since no other material offers such versatility of properties or is so suited to unusual demands. And stainless fastenings *cut costs* by lasting longer and reducing maintenance in many ways!

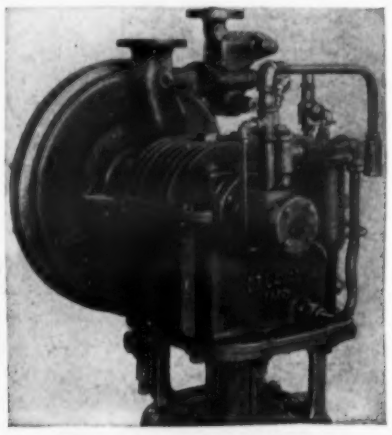
7,000 Varieties

Anti-Corrosive, America's oldest and largest supplier dealing *exclusively* in stainless fastenings, carries this tremendous stock for your convenience . . . plus a special order service available for occasional odd sizes.

Write TODAY for Folder B-49 for Further Information!

Anti-Corrosive Metal Products Co., Inc.
Manufacturers of STAINLESS STEEL FASTENINGS
CASTLETON-ON-HUDSON, NEW YORK

▲ Mention Item NED-6529 when writing ▲



De Laval-IMO lubrication and governor oil pump direct connected to high speed turbine shaft.

Pumps oil at 5800 rpm

De Laval-IMO pumps can be direct connected to high speed shafts. No space consuming gear reductions are necessary. Pump capacity is high compared to its size and weight.

Investigate the IMO if you need a dependable, high speed, pulsation-free pump for lubricating oils, fuel oils, hydraulic control fluids or viscous liquids.

Ask for Catalog L-21NT

I-154 W

IMO means I MOVE OIL

IMO PUMP DIVISION of the
DE LAVAL STEAM TURBINE CO.
TRENTON 2, NEW JERSEY

▲ Mention Item NED-6530 when writing ▲

You can...
SPEED PRODUCTION
INSURE ACCURACY
LOWER TAPPING COSTS
with SCULLY-JONES STYLE "A" TAP CHUCKS

See their 5 Big Features below; then see pages 25, 26, 27 of your SCULLY-JONES CATALOG No. 500. Write for our complete listing of sizes.

Refer to the Scully-Jones Catalog showing over 500 types and sizes of cutting tools, collet chucks boring equipment, centers, etc.

Scully-Jones AND COMPANY

2720 1952 SOUTH ROCKWELL STREET • CHICAGO 8, U.S.A.

▲ Mention Item NED-6531 when writing ▲

New Processes & Materials

GRAPHITE FILM provides stable lubricant

Applicable by spray or dip following normal surface preparation, this graphite film can be used on metals, plastics, rubber and ceramics. For most purposes no plating is required, although graphite can be applied over plated parts. Film applied by this process varies between 0.00015 to 0.0005-in. in thickness but has high resistance to abrasion and good bearing strength. Adhesion to surface is high, and sufficient diffusion of graphite into surface is obtained to insure presence of graphite surface even when external coating is apparently removed. Film is unaffected by exposure to solvents and weather and provides required characteristics over temperature range of —120° to 2000° F. Made by **Electrofilm Corp.**, 7116-21U Laurel Canyon Blvd., North Hollywood, Calif.

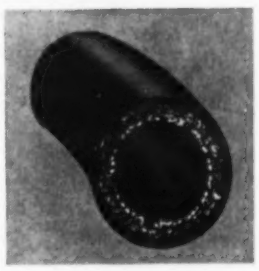
▲ Mention Item NED-6532 when writing ▲

ASPHALT-ENCLOSED BOARD for cold storage floor insulation

Specifically designed for use under wearing slabs of cold storage rooms, Fiberglas AE-F board will compress less than 1 per cent under floor loadings up to 1000 psf. This rigid asphalt-enclosed board differs from those employed for low temperature wall and ceiling insulation in that component glass fibers are arranged parallel to action of load to provide increased compression resistance. Density of board is 6 lb per cu ft. Heavy asphalt coating that completely surrounds insulating core prevents penetration of hot asphalt which is employed during installation to form vapor barrier. Board can be obtained in 2 and 3-in. thicknesses, 12 in. wide and 36 in. long. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

▲ Mention Item NED-6533 when writing ▲

SPRAY HOSE designed for high working pressures



Suitable for working pressures up to 800 psi, this spray hose, made in long lengths, is designed to handle many types of sprays which are destructive to rubber hose. Compounds of oil resistant rubber permit hose to be used satisfactorily with all types of horticultural sprays including DDT, 2-4D and weed killers with highly aromatic carriers. It can be employed also on hydraulic equipment, in car washing units and for carrying materials used in undercoating automobiles. Hose is obtainable in sizes ranging from ⅜ to ¾-in. ID. Cover is black with lead press molded finish. Made by **B. F. Goodrich Co.**, Dept. E, 500 S. Main St., Akron, O.

▲ Mention Item NED-6534 when writing ▲

HALLOWELL
Steel Collars

"HALLOWELL" Solid Steel Collars, functionally proportioned throughout . . . precision-machined so faces run perfectly true . . . are beautifully polished all over . . . yet they cost less than common cast iron collars. 3" bore and smaller are made from Solid Bar Stock. To make sure the collar won't shift on the shaft, they are fitted with the famous "UNBRAKO" Knurled Point Self-Locking Socket Set Screw—the set screw that won't shake loose when once tightened. "HALLOWELL" . . . a "buy word" in shaft collars . . . available in a full range of sizes for

IMMEDIATE DELIVERY

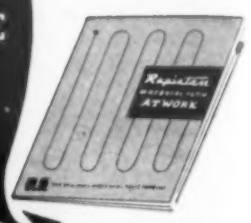
Write for name and address of your nearest "HALLOWELL" and "UNBRAKO" Industrial Distributors.

OVER 46 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNSYLVANIA BOX 581
CHICAGO - DETROIT - ST. LOUIS - SAN FRANCISCO

▲ Mention Item NED-6535 when writing ▲

HOW TO CUT NON-PRODUCTIVE LABOR COSTS, AND INCREASE WORKER OUTPUT



Production Managers . . . Works Managers . . . Plant Engineers . . . Traffic Managers! Get your free copy of *Rapistan* Material Flow at Work* — 32 pages of illustrated cost histories — packed full of money-saving facts on material handling — loading, unloading, stacking and processing! See how Rapistan power and gravity conveyors increase man-hour production . . . cut handling costs . . . eliminate slowdowns. *Send for your free copy — today!*

Rapistan *
MATERIAL flow EQUIPMENT
representatives in principal cities
*T.M.

The RAPIDS-STANDARD COMPANY, Inc.
128 Rapistan Building, Grand Rapids 2, Michigan

▲ Mention Item NED-6536 when writing ▲

THERMOBLOC
DIRECT-FIRED UNIT HEATER

SAVES OIL . . . SAVES SPACE
SAVES MAINTENANCE and
GIVES MORE HEAT

When fuel oil gets scarce again next winter, you'll be looking for methods to reduce your fuel consumption. Prepare for this shortage now by installing one or more THERMOBLOC Direct-fired Unit Heaters. Use your THERMOBLOC during the summer season to draw cool air from the floor level for circulation at working level.

THERMOBLOC is a revolutionary, new, direct-fired heating unit available in two sizes delivering 300,000 and 550,000 b.t.u.'s at an efficiency of from 82-86%. It occupies a floor area of only 30" diameter and is completely automatic in operation. In construction it is so simple that maintenance is reduced to a minimum.

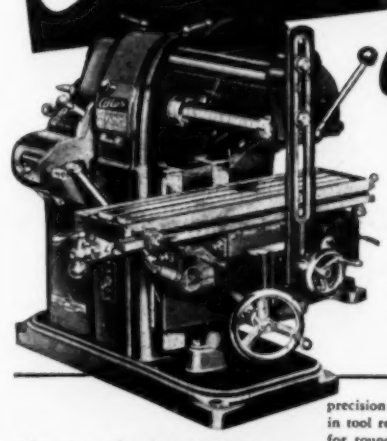
Where large areas are to be heated, several units can be placed at strategic points approximately 100 ft. apart. Write for your copy of the THERMOBLOC Bulletin No. 300.

These floor plans illustrate method of THERMOBLOC installation, depending on size of plant. THERMOBLOC may be placed against the wall or even in a corner.

THERMOBLOC DIVISION
PRAT-DANIEL CORP.
81 Water St., E. Port Chester, Conn.

▲ Mention Item NED-6537 when writing ▲

SLASH MILLING COSTS!



Atlas MILLING MACHINE

★ Timken bearings
★ Backgeared power
★ V-belt drive
★ 8 spindle speeds
★ 4½"x 18" precision-ground table

You can save hundreds of dollars a year with this Atlas miller on the job for small parts milling.

Its original cost is low — $315 for the Change-O-Matic machine, F.O.B., Kalamazoo, less arbor and motor. It will save many hours a month on set-ups — save on power and operating costs — and free your big machines for the jobs that only they can handle.

The Atlas handles the full range of milling from slabbing and facing cuts to end milling, keyways, finishings, and layout work. It is a precision machine in *every* respect—valuable in tool room or laboratory—ruggedly built for round-the-clock production. Adding air chucks gives you a semi-automatic producer at exceptionally low cost.

Send for new catalog — just off the press — with complete specifications and operating details.

Atlas Press Co.
923 N. PITCHER STREET
KALAMAZOO, MICHIGAN

MATCHED PRECISION TOOLS FOR WOODWORKING AND METALWORKING

▲ Mention Item NED-6538 when writing ▲

1001 Uses HANSEN TACKERS

Industrial users find that the versatile Hansen Tacker saves hours and dollars on all kinds of fastening problems in production assembly, in tagging boxes for the warehouse, lining shipping crates, etc.

The Hansen drives stout staples securely, as fast as you can squeeze the grip. Compound leverage and the compression spring do the work for you—drive home each staple with a measured triphammer blow.

The Hansen Tacker holds scores of staples, and takes but a moment to reload. There are economical Hansen models for every type of operation.

ASK FOR FREE FOLDER

A. L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

▲ Mention Item NED-6539 when writing ▲

Alnor Velometer

Gives instant, direct reading of Air Velocity —Anywhere!

Here's a precision-built, self-contained, portable instrument that gives instant, *accurate* reading of air velocities—everywhere, in plants, mines, or mills. Measures speed of flow through ducts, grilles, motors, furnaces, or in the open. Needs no calculations or reference charts. Anyone can use it and get accurate measurements. Available in a wide range of scales, and with a wide assortment of jets and fittings if needed. You'll want full details and prices, so write for Bulletin No. 2448-G. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Illinois.

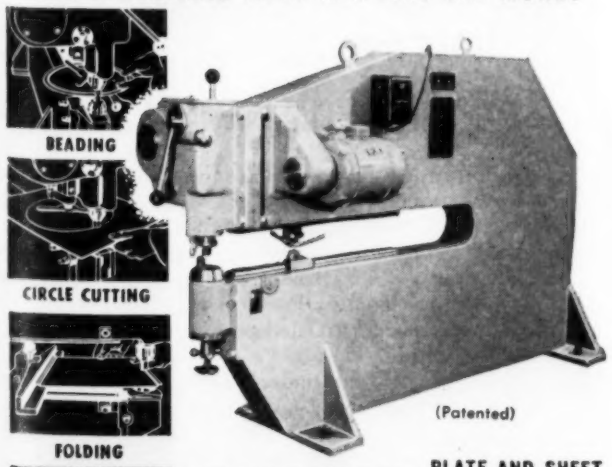
Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ Mention Item NED-6540 when writing ▲

SAVE TIME • LABOR • MATERIAL

PULLMAX DOES ALL THIS and MORE!



PULLMAX PLATE AND SHEET CUTTING MACHINES

With Pullmax you can work mild and stainless steels, as well as non-ferrous metals. Cuts circles, straight edges, inside designs, slots—does beading, folding and nibbling from shim steel up to ⅜" in mild steel.

Write for Illustrated Catalog

AMERICAN PULLMAX COMPANY, INC.
2627 N. WESTERN AVENUE • CHICAGO 47, ILLINOIS

▲ Mention Item NED-6541 when writing ▲

New Processes & Materials

NONMETALLIC MAGNET for lightweight, compact cores

Similar to ceramics since it is of uniform structure and contains no organic compounds, Ferramic nonmetallic material possesses ferro-magnetic properties and is adaptable for use where space and weight are factors. It can be mass produced in most shapes and sizes to close tolerances. It has uniformity of magnetic properties and will not decompose at elevated temperatures. Made by **General Ceramics & Steatite Corp.**, Dept. A, Keasbey, N. J.

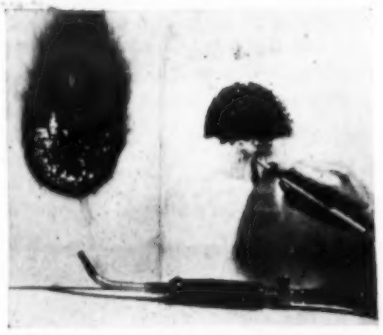
▲ Mention Item NED-6542 when writing ▲

ALLOY CAST STEEL perfected for use at —423° F

Containing 19.5 per cent chromium and 9 per cent nickel, Lebanon grade 22 austenitic cast ferrous alloy is particularly applicable in oil, chemical and other processing industries. It has already been used effectively in production of steel castings for pressure equipment in storage facilities for liquid oxygen. No structural changes occur at temperatures as low as —423° F. This alloy can be welded by gas or electric processes without need for subsequent heat treatment. Made by **Lebanon Steel Foundry**, First Ave. & Lehman St., Lebanon, Pa.

▲ Mention Item NED-6543 when writing ▲

FIRE RETARDING PAINT designed for indoor application



When exposed to direct flames or extreme heat, Coating X fire - retardant paint creates inch-thick marshmallow-like substance. This spongy mass serves as insulation and retards spread of fire. It is intended for use on basements, ceilings and aircraft interiors. Illustration shows results obtained when welding torch was held against plywood panel for 5 minutes. Flames caused wood to burn and char away in area at left above which had previously been coated with conventional paint. Section at right had been covered with fire-retardant paint, and wood was unharmed by intense heat and flame of torch.

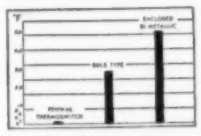
Coating is powder, thinned with water, and resembles clear varnish in appearance. Once applied, it can be covered with conventional paint to provide color, and its fire-retardant qualities are unaffected. Coating is available only for experimental purposes at present. Made by **Sherwin-Williams Co.**, Dept. E, 101 Prospect Ave. N.W., Cleveland 13, O.

▲ Mention Item NED-6544 when writing ▲

An Actual Fact!...

3 Fenwal Thermostat Units Costing Less Than $25 Apiece Eliminate Instrument-Controlled Equipment Quoted at $18,000!

Instead of a costly, elaborate indicator-controller installation, a manufacturer selected three compact, easily installed Fenwal THERMOSWITCH* units for use with simple equipment designed with the assistance of a Fenwal engineer. Accurate, rugged and with contacts fully enclosed by the temperature-sensitive shell, these Fenwal precision thermostats are giving complete satisfaction . . . at a tremendous saving in original cost and maintenance expense.



THERMOSTAT OPERATING DIFFERENTIAL

In conventional temperature controls, differential is the result of backlash caused by moving parts. The THERMOSWITCH*, with no such moving parts, has a negligible differential as shown in the chart.

As in this solution to a problem of temperature control of dies in the synthetic filament industry, you too may make amazing savings in heat control.

FENWAL, INCORPORATED
31 Pleasant Street, Ashland, Mass.

Fenwal

WRITE FOR BULLETIN ON THE AMAZING

THERMOSWITCH*

*Reg. U. S. Pat. Off.

The Precision Thermostat For Temperature Control and Over-and-Under-Heat Detection

SENSITIVE . . . *but only to heat*

▲ Mention Item NED-6545 when writing ▲

When PRECISION is the word

JELLIFF HAS A MESH FOR IT (particularly in the finer weaves, where hole size is vital to a delicate process.)

WIRE CLOTH has long been preferred for its EXTREME ACCURACY and UNIFORMITY.

Meshes — as fine as 200 x 200 — 50 x 750 . . .

Materials — any ductile metal inert to your process . . .

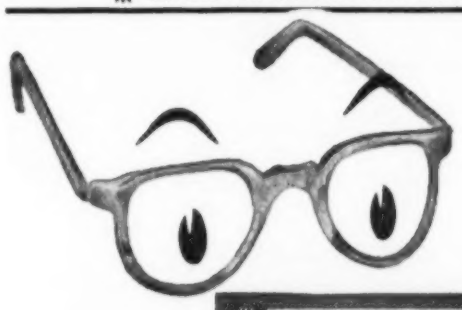
Weaves — Straight, Twilled, Dutch-Twilled; crimped, calendered — or have you something new? We haven't been stumped yet on special orders.

Just send your specifications to

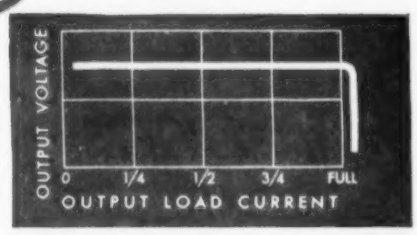
Department II.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS
LEKTROMESH
RESISTANCE WIRE
WIRE MESH PARTS
WIRE CLOTH
STRAINERS • FILTERS
SOUTHPORT CONNECTICUT

▲ Mention Item NED-6546 when writing ▲



IMAGINE THESE CHARACTERISTICS APPLIED TO YOUR PRODUCT!



Take another look at this regulation curve. It's smooth and flat over the entire load range . . . with automatic overload protection through constant current control at any pre-set load. These are the precise control characteristics achieved by Power Equipment Company during its 14 years specialization in circuit development and design . . . characteristics which may readily be applied wherever functions or operations can be translated into electrical values. So, if you're in need of closer control or regulation to improve your products or your processes, get in touch with PECO today.

POWER EQUIPMENT Company

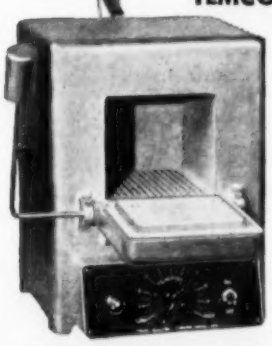
Specialists in Controlled Rectifiers Since 1935

55 ANTOINETTE ST. DETROIT 2, MICHIGAN

▲ Mention Item NED-6547 when writing ▲

GET THE EXTRA ADVANTAGES OF Stepless Heat Control FROM 350°F. TO 1850°F.

WITH THESE LOW COST TEMCO ELECTRIC FURNACES



Economical to own and operate, TEMCO models RCE (illustrated) and GTP are ideal "utility" units for the laboratory, shop or plant. Exceptionally handy for general lab work, production control and heat treating. Both models have built-in TEMCOMETER stepless control which is unaffected by line voltage fluctuations and lets you select *and hold* any temperature from 350° to maximum . . . indicating-type pyrometer calibrated in F. and C. scales . . . embedded heating element completely surrounds chamber . . . cast aluminum body . . . special insulation. Chamber dimensions: Model RCE — 4¾" W., 4¼" H., 6" D.; Model GTP — 4" W., 3¾" H., 3¾" D.

Prices Model RCE Complete	Prices Model GTP Complete
For 115V. AC.....$75.00	For 115V. AC.....$37.50
For 230V. AC.....$80.00	For 230V. AC.....$62.50

Write for data and dealer's name

THERMO ELECTRIC MANUFACTURING CO.
484-9 West Locust St., Dubuque, Iowa.

▲ Mention Item NED-6548 when writing ▲

HERE'S HOW...

PRODUCTION WAS INCREASED 40%

costly lab treated taps produced 15,000 threaded holes per tap

HY-PRO ENGINEERING cut tap costs and increased production to 21,000

PART: Pressed steel tubular nut.

PROBLEM: A leading special products manufacturer was tapping with a 5/16 – 18 spiral point tap to a depth of 3/4" full thread in tough, stringy steel. To average 15,000 holes per tap, many required lapping to size and all were specially surface treated. A costly, time-consuming process for the user.

Then they called in a Hy-Pro Engineer.

HY-PRO SOLUTION: He recommended a Hy-Pro quality controlled 5/16 – 18 spiral point tap with an exclusive Hy-Pro surface treatment that provides longer wear and proper lubrication. Production now consistently runs 21,000 threaded holes per Hy-Pro tap — *and* they are used without modification.

Let Hy-Pro solve your tapping problem too — call a Hy-Pro Sales Engineer today.

Order from your Distributor

HY-PRO TAPS

HY-PRO TOOL CO.
NEW BEDFORD, MASSACHUSETTS
A SUBSIDIARY OF CONTINENTAL SCREW COMPANY

Mention Item NED-6550 when writing

UP YOUR PROFITS DOWN YOUR COSTS

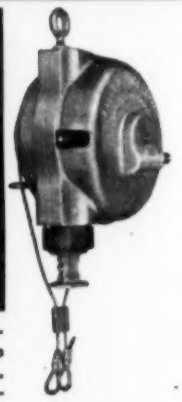
PORTELVATOR
the
HANDY HAMILTON
PORTABLE ELEVATING TABLE

ELEVATES • LOWERS • TRANSPORTS
Table locks securely wherever stopped.
WILL NOT TIP OR SLIP
A work bench when and where you need it.
WRITE FOR BULLETIN
giving detailed data
DO IT NOW

THE Hamilton TOOL COMPANY
SUPER-SENSITIVE DRILLING MACHINES · TAPPING MACHINES · PORTELVATORS
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

Mention Item NED-6551 when writing

New TIMESAVERS... TOOL SAVERS



Balancer 65A-2 (left) suspends tools up to 10 lb over or near the work area. Cuts tool handling time; reduces operator fatigue.

Model 65A-4 has 20-lb capacity. Enables operator to bring heavier tools quickly, effortlessly to the work piece.

BALANCERS FOR PORTABLE TOOLS

Increase your work output with Keller Balancers! Suspension of tools over work benches and tables eliminates waste motions and tool wear due to careless handling. Working range is six ft. Balancers have a simple load adjustment, adjustable cable clamp and suspension snap hooks.

KELLER Pneumatic Tools

KELLER TOOLS

KELLER TOOL COMPANY, GRAND HAVEN, MICH.

Mention Item NED-6552 when writing

New Processes & Materials

SILICONE RUBBER has high tensile strength

Recommended for parts exposed to ozone, tricresyl phosphate and chlorinated hydrocarbons in liquid-cooled transformers, No. 250 silicone rubber can be furnished in molded, extruded, punched and lathe-cut shapes. It can be fabricated into washers, gaskets, sleeves and tubing, and parts made from it will give satisfactory service at temperatures below −100° F and higher than 500° F. Tensile strength, elongation, tear resistance and dielectric properties have been improved over previous silicone rubbers to the extent that product of tensile and elongation stand in ratio of 2:6. Tear resistance is at least three times that of earlier stocks. Made by **Stalwart Rubber Co.**, 151 Northfield Rd., Bedford, O.

Mention Item NED-6553 when writing

ASBESTOS SHEET PACKING compressed fibers are water sealed

Developed to particular performance requirements of Army-Navy Aeronautical Specification AN-G-171, Palmetto compressed asbestos sheet packing No. 2915 combines high resistance to heat, oil and solvents with particular resistance to alcohol-water and ethylene glycol-water mixtures. Because asbestos fibers have been sealed to prevent liquid absorption, this packing also highly impervious to such refrigerants as Freon. It has tensile strength with grain of 6150 psi, 10 per cent recovery at 1000 psi and 99 per cent recovery with no load and will not crack if bent 180 degrees. Made by **Greene, Tweed & Co.**, 333 Elm St., North Wales, Pa.

Mention Item NED-6554 when writing

EXPANDED METAL used in self-service carts

Use of expanded metal provides lightweight material for baskets such as shown. Not only are baskets attractive but they are easy to keep clean. When top basket is tilted out of way, lower basket of this telescoping cart can be raised to top level and locked in position for easy unloading. Carts can be nested together, telescoping so that 4½ in. is all that is reqiured for each cart in row after first one. Carts are made by Telescope Carts, Inc., and expanded metal by **Penn Metal Co.**, 42 Central St., Boston 9, Mass.

Mention Item NED-6555 when writing

The OFFICE VALET

LOCKERETTE
—Combines the best features of both lockers and coat racks

Improves health and morale —lowers absenteeism.

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 feet; the No. 9-18 (illustrated) accommodates 18 in 9 feet.

Write for Bulletin No. OL 8

VOGEL-PETERSON CO.
624 So. Michigan Ave., Chicago 5, Ill.

Mention Item NED-6556 when writing

FULL PUNCHING CAPACITY AT ½ COST

PACIFIC
HYDRAULIC PRESS BRAKES

Model 400 PACIFIC Hydraulic Press Brake equipped with a 28"x144" Whistler die set, at the Federal Electric Co., Chicago, Illinois

The Model 400 equipped with **GIANT DIE SET** (Whistler 28" x 144") provides punching capacity at an initial cost less than one-half that of conventional multiple punches.

Made for any desired die surface in capacities up to 1400 tons and larger.

Punching, blanking and **piercing** operations performed at speeds up to 30 strokes per minute.

Dies fully protected by relief valves. **Rapid setup. Variable stroke length.**

Write for descriptive bulletin and prices.

PACIFIC INDUSTRIAL MANUFACTURING CO.
848 Forty-Ninth Avenue • Oakland 1, California

Mention Item NED-6557 when writing

the handiest marking tool you've ever used!

Flo-master
FOUNTNBRUSH and INKS

WRITES ON ANY SURFACE!

No marking job is too tough for the *Flo-master*. Name your surface—cellophane, metal, foil, glass, wood, waxpaper—it writes on anything! Dries instantly. Won't rub off.

Carry the *Flo-master* in your pocket like a fountain pen. Won't leak—thanks to automatic valve control. *Flo-master* instant-drying Ink is available in black and seven brilliant colors. Interchangeable nibs make possible lines from 1/32" to 3/8" wide.

Ask your supplier about Flo-master FOUNTNBRUSH and INK sets today. They contain everything you need to make marking a cinch!

$3.50

CADO Cushman & Denison Mfg. Co. 135 West 23rd St., New York 11

Mention Item NED-6558 when writing

Cut Polishing Time
Improve Surface Quality
with "LINDE" FINE ALUMINA POWDERS

Obtain superior finishes, free from microscopic pits and scratches in a fraction of the usual polishing time. Use less abrasive and use it directly without levigation and other wasteful preparatory steps. They can also be compounded with waxes and used in stick form.

LINDE Fine Alumina Powders are characterized by ultra-fine, uniform particle size, high purity, and swift polishing action. They have gained wide-spread acceptance in polishing materials ranging from metallographic specimens to gemstones and noble metals.

Call or write any LINDE office and we will be glad to discuss your particular polishing applications.

	Type A	Type B
Chemical Composition	Alpha Al_2O_3	Gamma Al_2O_3
Particle Size (approximate)	0.3 Microns	Less than 0.1 Microns
Hardness (Moh's) (Equivalent to crystalline material)	9	8
Crystalline Structure	Hexagonal	Cubic

The term "Linde" is a trade-mark of The Linde Air Products Company

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

Mention Item NED-6559 when writing

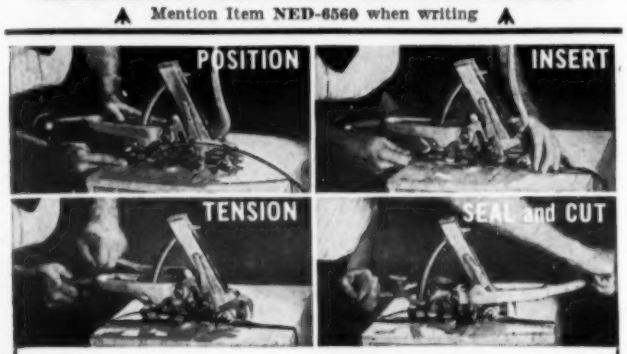
the Snap Gage You Will Eventually Use!

Here's the gage that has what you want! Model 1000 is completely new and up-to-date in every detail . . . *and its price is right.* No tricky gadgets. Simple, easy to set, and easy to use. Dead to temperature changes. Gives accurate, visible, positive readings. Fully guarded to withstand roughest treatment. Handles like conventional gage. Five sizes cover full range from 0 to 6". Write today for descriptive bulletin and price. Federal Products Corporation, 1118 I Eddy St., Prov. 1, R. I.

FEDERAL

Dial Indicators • Indicating Gages • Special Gages
Electronic and Automatic Sorting Gages • Air Gages

Mention Item NED-6560 when writing



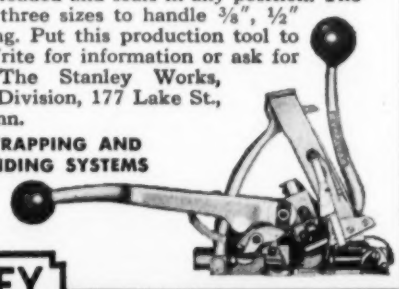
4 STEPS . . . 5 SECONDS

with the Improved

STANLEY ACE STRAPPING TOOL

● Puts strapping on a production basis! Even a beginner can make time with it. Magazine holds 75—100 seals — is easily loaded and seals in any position. The "Ace" comes in three sizes to handle 3/8", 1/2" and 5/8" strapping. Put this production tool to work for you. Write for information or ask for demonstration. The Stanley Works, Steel Strapping Division, 177 Lake St., New Britain, Conn.

STEEL STRAPPING AND CAR BANDING SYSTEMS



STANLEY
Reg. U.S. Pat. Off.
HARDWARE · HAND TOOLS
ELECTRIC TOOLS

Mention Item NED-6561 when writing

GRAY-MILLS

PUMP UNITS

Use these portable self-contained units as . . .

In a matter of minutes you can connect a Gray-Mills Portable Pump Unit to any machine and assure a continuous, controlled flow of coolant or other liquid. Units are complete with containers, motor driven pumps with filters, hose, control valves and flexible metal nozzles.

GEAR AND CENTRIFUGAL PUMPS
Volumes to 43 GPM—Pressures to 50 PSI—5-12-38 gallon containers.

Send for catalog to

GRAYMILLS CORPORATION
2005 Ridge Ave., Evanston, Ill.

Mention Item NED-6562 when writing

New Processes & Materials

LIGHTWEIGHT STEEL BEAMS use as roof purlins in industrial building has resulted in savings

Lightweight hot rolled steel Junior Beams used for roof purlins in construction of an industrial building were bolted into their final position. Installation of truss type steel joists with fixed ends in same building would have required costly second operation after frame of building was erected. After beams were erected, sag rods of 5/8-inch steel rounds threaded at end were installed and bolted for additional lateral rigidity. Steel roof decking was welded directly to beams and was then covered with layer of tar and slag for further insulation and protection. One 10-in. purlin 16 ft long weighs less than 150 lb and can support evenly distributed load of nearly 3 tons. Since beams can be notched at various depths, they facilitate forming of roof slope. Made by **Jones & Laughlin Steel Corp.,** Room 553, 311 Ross St., Pittsburgh 30, Pa.

Mention Item NED-6563 when writing

SYNTHETIC EMULSION for degreasing metal products

Usable in standard cleaning equipment for removing grease from metal parts prior to assembly or shipping, Mulsolv degreasing agent is nontoxic and nonirritating to skin or nasal passages. Material has been field tested for six months and found to leave no scum and to cause negligible corrosion of cleaned parts. It can be obtained in 50-gal drums and mixed with 300 parts of water to make solution recommended for general use. Made by **Bee Chemical Co.,** 13799 South Ave. O, Chicago 33, Ill.

Mention Item NED-6564 when writing

GRANULAR HAND CLEANSER removes imbedded grime and grease

Combining cleansing, detergent and scrubbing action, Handisan cleanser has emollient properties which make it suitable for removal of many types of soil from hands. Because it contains no bulky fillers or mineral or vegetable abrasives to clog plumbing, it is convenient and economical to use. Free 5-lb trial offer of this material can be obtained by companies having at least 25 employees by requesting it on company letterhead. Made by **Turco Products, Inc.,** Dept. 25, 6135 S. Central Ave., Los Angeles 1, Calif.

Mention Item NED-6565 when writing

STURDY, CONVENIENT, LOW-COST JIFFY ALL METAL CABINETS

FOR SMALL PARTS, DRILLS, TOOLS, CARBIDE TIPS AND MOUNTED POINTS

32 DRAWER UNIT • DIVIDES INTO 96 COMPARTMENTS **$8.95**

POSTAGE PAID

64 DRAWER UNIT • DIVIDES INTO 192 COMPARTMENTS **$15.95**

Rustproof Aluminum Drawers

Complete set of Dividers and Index Cards supplied.

APPROXIMATE SIZES
DRAWER 1¼" Deep 2¾" Wide 6" Long
32 DRAWER UNIT 6" Deep 12¾" Wide 15¼" High
64 DRAWER UNIT 6" Deep 25½" Wide 15¼" High

Spot welded steel cabinet, metal flange drawer guides, enamel finish and solid one-piece aluminum drawers in natural satin finish. The first multiple drawer metal cabinet for convenient storage of small parts, drills, tools, carbide tips, mounted points or assembly bench work at such a low cost. Order now for immediate delivery. Send check or money order or rated companies shipped on receipt of purchase order.

KAYTEE PRODUCTS
DEPT. P BOX 588 - CANTON, OHIO

Mention Item NED-6566 when writing

CURTIS AIR CYLINDERS

Increase Plant Efficiency • Decrease Production Cost

CURTIS PNEUMATIC MACHINERY DIVISION
of Curtis Manufacturing Company
1979 Kienlen Avenue Saint Louis 20, Missouri
149-1A

95 YEARS OF SUCCESSFUL MANUFACTURING

Mention Item NED-6567 when writing

For Safety's Sake Use

DAYTON SAFETY LADDERS

Maintenance men everywhere rely on Dayton Safety Ladders for maximum safety and convenience. Daytons are constructed of tested airplane spruce and reinforced with rigid steel supports to give great strength and lightness of weight.

Handrails of steel guard the large roomy platform for added safety. Half of platform can be raised to form an extra step, when needed. These famous ladders can be set up instantly, are easy to carry and fold compactly for storing. Automatic locking feature insures safety while ladder is in use.

Sizes 3 feet to 16 feet in height with standard rubber safety shoes at no extra cost.

Write today for Bulletin No. 10

DAYTON SAFETY LADDER CO.
2339 GILBERT AVE. CINCINNATI, OHIO
In Canada—Safety Supply Company—Toronto

Mention Item NED-6568 when writing

HEAVY DUTY RECEPTACLES AND PLUGS

VAPOR TIGHT WATER TIGHT AND EXPLOSION PROOF

Tested *in service* in shipyards, airports, stadiums and industry, Russell and Stoll fixtures and fittings have pioneered with prestige for more than forty years.

The "know how" of design, precision production and careful inspection of R & S products meet all requirements of moisture, dust or explosion hazards.

The heavy duty angle type receptacle and plug illustrated is standard in ratings 10 to 400 amperes and single to

Sold Through Electrical Wholesalers

29 SALES OFFICES IN PRINCIPAL CITIES

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

Mention Item NED-6569 when writing

Standard's Locknuts and Lockwashers are made to stay . . . you can't shake them loose. They're easy to apply, durable, and can be used again and again. Order Standard Locknuts, Lockwashers, and Adapters for your application of ball and roller bearings . . . S.A.E. Standard, A.B.E.C. Standard, Heavy-duty and Specials.

Locknuts in sizes N-00 through AN-40 . . . Multi-prong Lockwashers in sizes W-00 through W-40 . . . Adapter sizes 7-9-11-13 for shaft sizes $1\frac{3}{16}$", $1\frac{7}{16}$", $1\frac{13}{16}$", $2\frac{3}{16}$" . . . standard shaft collars, sizes ½", ⅝", ¾", ⅞" and 1". Order now from our complete stock.

Standard
LOCKNUT & LOCKWASHER, INC.
118 W. ST. CLAIR ST., INDIANAPOLIS 4, INDIANA

▲ Mention Item NED-6570 when writing ▲

SCHRAMM
AIR COMPRESSORS

Built-in Motor Drive on Base

A real space saver for busy shops and where very little room can be allowed for compressor installations. This combination also lends itself to quick and easy handling to meet air requirements in various sections of large industrial plants without a lot of expensive pipe line work.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

▲ Mention Item NED-6571 when writing ▲

NEW NOZZLE
GIVES ORDINARY WATER GREATER FIRE EXTINGUISHING POWER

ROCKWOOD TYPE SG-48
LIGHTweight WaterFOG NOZZLE

Discharges
- HIGH VELOCITY WaterFOG
- STRAIGHT STREAM
- LOW VELOCITY WaterFOG

Rockwood WaterFOG Nozzles will out-perform any other fog nozzles operating on either high or low water pressures for all around fire fighting purposes. They will provide greater protection and fire fighting efficiency for your firemen. Approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories. Write for Bulletin C-501R.

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

▲ Mention Item NED-6572 when writing ▲

New Processes & Materials

VINYL FILM
soft, thin and fadeproof

Having exceptional tear and flame-resistant characteristics, soft fadeproof 2-mil vinyl film is suitable for table cloth covers, drapery materials, garment bags and similar products. It is obtainable in all translucent and opaque colors and in widths up to 54 in. Produced by casting process, film has accurately controlled thickness and is free of pinholes. Made by **Goodyear Tire & Rubber Co.**, 1144 E. Market St., Akron 16, O.

▲ Mention Item NED-6573 when writing ▲

OIL FILTERING MEDIUM
provides ample dirt storage

Consisting of combed high-grade cotton with fine Sequoia bark fibers, Hiltex cellulose filtering material is suitable for use with mineral, heavy-duty, additive and detergent type oils. Its uniform density and light weight permit use of less material per cartridge filling while providing greater capacity than conventional cotton waste threads. It is supplied in 2½-lb batts for convenient handling. Samples can be obtained by addressing manufacturer. Made by **Hilliard Corp.**, Hiltex Dept., 40 W. Fourth St., Elmira, N. Y.

▲ Mention Item NED-6574 when writing ▲

PLASTIC COATINGS
protect metals that must be immersed in corrosive mediums

Designed for protection of all types of metals subjected to extreme corrosive conditions, Cyclon series WPS selective plastic coatings formulated from basic vinyl resins are unaffected by acids, alkalies, salts and other reagents. Adhesion is secured by chemical interaction of primer with metal surface which unites them integrally. Bond is not dependent on mechanical roughening of metal surfaces, and primer's corrosion-inhibiting pigments also develop impermeable film completely preventing underfilm metal deterioration.

To complete selective coating cycle, tie coat and final top coat formulations are used. Tie coat is intended to unite primer with top coating but can be used over primer for general maintenance applications where atmospheric corrosion is a problem or where metal protection is necessary under water or in mild reagents. Top coat which is blended and compounded of inert thermoplastic resins is applied as final sealing coat.

These coatings can be applied by brush, spray or dipping and have high solids content which results in ample coverage per gallon and heavy film per coat. Coatings air-dry in matter of minutes by solvent evaporation. Made by **Munray Products, Inc.**, 12401 Crossburn Ave., Cleveland 11, O.

▲ Mention Item NED-6575 when writing ▲

Cuts Sheet Steel, Aluminum, Plastics, Plywood, Cast Iron, etc.

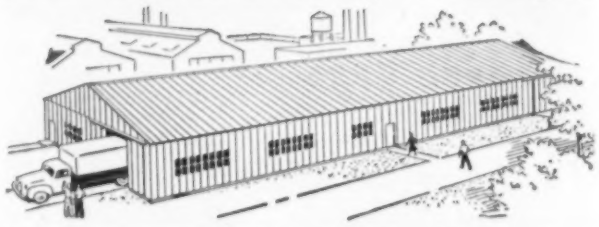
Here's real news: No starting holes required. No delays. "Milled edge" finish in one operation. No filing, straightening or deburring edges. Saws practically any sheet material (except stainless steel) up to ¼" thick. Adjust "shoe" for desired depth of cut. The Kett Power Saw does everything and more than shears or nibblers do—and does it easier and better. Easy to saw on straight lines or curves of 12" radius or more. Blades are inexpensive, last long, are replaced in half a minute.

Write for interesting Bulletin E-9. Ask your dealer for a demonstration. No obligation.

The KETT Tool Company
5 EAST THIRD ST. CINCINNATI 2, O.

▲ Mention Item NED-6576 when writing ▲

HERE'S A LOW-COST STEEL BUILDING
That Saves Money 5* Ways!



*
1 Standardized, Yet Extremely Flexible to Meet Your Specific Requirements!
2 Heavy Construction . . . Meets Local Building Codes!
3 Permanent, Yet Easily Erected!
4 Multiple Widths—Any Length!
5 Ready for Delivery NOW!

For additional, quickly-erected storage and production space . . . STEELCRAFT Standardized Structural Parts and Sections! Add to existing buildings, combine with architecturally designed structures, use as separate, complete building units! Choice of many types of wall and roof panels . . . optional construction features . . . for adaptability to any type of occupancy!

Write Today—or Have Your Architect, Engineer, or Contractor Consult Us for Complete Information . . . No Obligation.

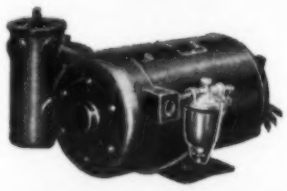
STEELCRAFT MANUFACTURING COMPANY
9172 Blue Ash Road
Rossmoyne, Ohio (in Greater Cincinnati)

STEEL Craft REG. U.S. PAT. OFF.

▲ Mention Item NED-6577 when writing ▲

★ FOR MACHINES USING VACUUM OR AIR
This compact pump requires NO Extra Space!

Powerful accessory—scarcely larger than its own motor.



Designers can plan to mount Motoair Pumps on walls, ceilings or bases, where no extra floor space is needed.

MOTOAIR PUMPS

Effective source for vacuum or pressure, made with less parts for longer life. No drives, no belts, no hinged blades—just smooth, efficient power without pulsation, and with a visible self-lubricating system. Ask for catalog details!

806

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

▲ Mention Item NED-6578 when writing ▲

The FIBER OF 1000 USES
AMOSITE ASBESTOS FIBER
FROM SOUTH AFRICA

A unique long fiber asbestos with high resilience and bulking characteristics particularly desirable for insulating material and for reinforcing asbestos cement products or plastic materials. Relatively rapid release of water in filtering operations. High acid resisting characteristics equal to blue asbestos. Fire, rot, mildew resistant. Will not harbor vermin. Completely inorganic.

Write For Sample and Details

UNION ASBESTOS & RUBBER COMPANY
1813 SO. 54th AVE., CICERO 50, ILL.

▲ Mention Item NED-6579 when writing ▲

MICO

2 & 3 DIMENSIONAL ENGRAVER

Reproduces any master model in 4 ratios

Economical, three-dimensional milling has now become an actuality through the use of the Mico Model 252 Engraver. Accurate reproductions of enlarged masters can be made by merely tracing the master model with the stylus. This machine fills the need for an inexpensive, portable engraver, which is absolutely accurate and dependable. Small dies, tools and molds can be economically fashioned out of any material up to and including steel for hardening. These units can be used for plastics, rubber, glass, die castings or any other forming operation. Any master model can be reproduced in 4 ratios.

Improved pantograph design simplifies conventional engraving of templates, nameplates, panels, trademarks and machined parts.

Illustrated catalog available at your request.

MICO INSTRUMENT CO.

80D TROWBRIDGE STREET, CAMBRIDGE, MASS., U. S. A.

▲ Mention Item NED-6580 when writing ▲

Important, Profitable REASONS . . .

Brightboy, tested against other methods and materials, is showing cost-conscious production men substantial time and labor savings.

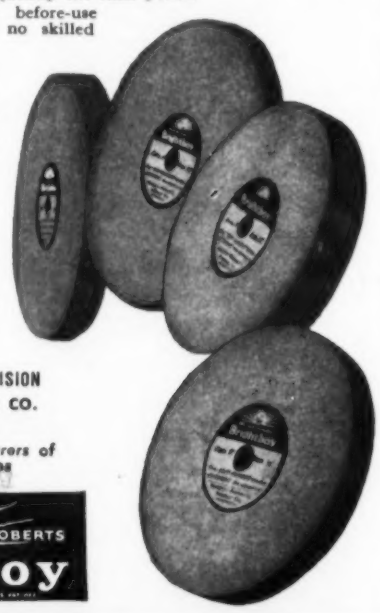
Why METALWORKING, WOODWORKING & PLASTICS INDUSTRIES BUY & USE ABRASIVE + RUBBER Brightboy

1. Brightboy is used following the rough grind. IN ONE OPERATION, Brightboy abrasive and rubber, working simultaneously, burr, finish, clean, polish: bridge the gap between the grind and buff.
2. Brightboy works to close tolerances. Can be shaped to contours.
3. Brightboy produces a wide variety of conventional and special surface-finishes and patterns; frequently the final polish.
4. Brightboy requires no before-use preparation or dressing; no skilled labor to handle it.

WHAT BRIGHTBOY IS

Brightboy is a combination of rubber and abrasive in perfect balance, the product of America's pioneer manufacturers of rubber-bonded abrasives.

★ *Ask your dealer for the Brightboy Catalog-Manual. Write our Service Department on production or methods problems where finishing is involved.*



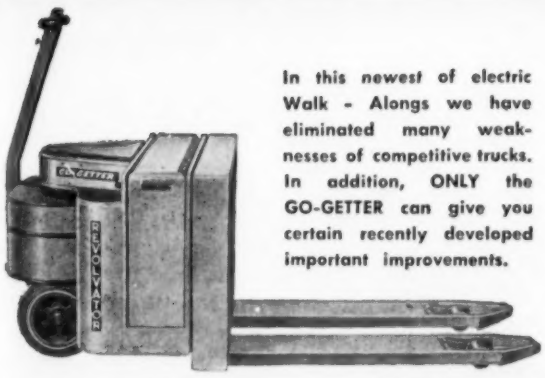
BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
NEWARK, 7, N. J.

America's Pioneer Manufacturers of Rubber-Bonded Abrasives

WELDON ROBERTS **Brightboy**

▲ Mention Item NED-6581 when writing ▲

GO-GETTER POWER LIFTRUCK



In this newest of electric Walk - Alongs we have eliminated many weaknesses of competitive trucks. In addition, ONLY the GO-GETTER can give you certain recently developed important improvements.

For example, only the GO-GETTER gives you triple reduction gear; maximum 7" traction surface at all times and articulated dual wheel drive. Only the GO-GETTER and one other have positive spring-set deadman electric brake.

These and other recent developments make the GO-GETTER the last word in the four E's. . .efficiency, economy, endurance and ease of operation.

Facts speak louder than claims. Write, phone or wire

REVOLVATOR CO.

DESIGNERS AND MANUFACTURERS OF MATERIAL HANDLING EQUIPMENT

8732 Tonnele Ave. NORTH BERGEN, N. J. Since 1904

▲ Mention Item NED-6582 when writing ▲

New Processes & Materials

FLEXIBLE RUBBER PIPE
for abrasive or corrosive material

In sandblasting, concrete placing or grouting where connection must stand severe abrasion or in handling acid in chemical plants where metal would be attacked, Goodite rubber pipe with Flang-Lok provides longer service life than metal pipe. Swiveling type flange permits it to be used in place of curved pipe and allows it to be turned occasionally to change point of greatest wear and prolong its life. Pipe can be supplied with inside diameters from 5 in. up in lengths to 50 ft. Made by **Goodall Rubber Co.,** 492 Whitehead Rd., Trenton 4, N. J.

▲ Mention Item NED-6583 when writing ▲

SOLDER FLUXES
pastes have high wetting action

Melting point of No. 66 silver solder paste flux is 650° F, and its liquefaction remains constant to 1650° F. Low melting point helps flux to wet and clean metal. Flux also has low viscosity and high capillary action.

For soldering steel, silver, copper, brass and electroplated parts, No. 77 soft solder paste flux is recommended. This flux will not leave any acid or gummy residue or create noxious fumes. Its action is noncorrosive, and its residues are completely soluble in water. Made by **Superior Mfg. Co.,** Dept. N-8, 1302 Ontario St., Cleveland 13, O.

▲ Mention Item NED-6584 when writing ▲

PISTON RINGS
of stainless steel for high temperature applications

Stainless steel which maintains tension under extreme temperatures and is corrosion resistant is employed in this series of Non-Breakable piston rings. Free from distortion, rings minimize friction and wear by providing dissimilar metal for rubbing surfaces and increase compression efficiency by near-constant expansion factor which permits close tolerances between ring and cylinder wall.

Rings are formed from open-end metal to true circle proportions and heat-treated in that shape. They are ground on outside diameter and lapped on sides for efficient seating. Lapping permits use of two rings in one ring groove for maximum efficiency. Made by **Steel or Bronze Piston Ring Corp.,** 545 S. Meridian St., Indianapolis 25, Ind.

▲ Mention Item NED-6585 when writing ▲

SCHWEITZER **Va-jett** TORCH

This Sensational New SCHWEITZER **VAPOR-JET TORCH**

Has All the Features You've Been Looking For!

. . . AND IT'S SAFE!

The Schweitzer VA-jett torch operating on a completely new vaporizing principle, delivers super-heated gasoline vapor for combustion. NO PUMPING IS NECESSARY. . .sufficient working pressure is created automatically!

This new vaporizing principle makes possible VA-jett's amazing performance in any position. . .even when used inverted! Completely new in design and performance, VA-jett is SAFE! The extruded aluminum body is electrically welded, heat treated and guaranteed to withstand many times the maximum operating pressure.

VA-jett has been tested and approved by the U. S. Army and Navy for their sub-zero operations at temperatures down to 50 degrees below zero.

Z&W MACHINE PRODUCTS INC.

5151 ST. CLAIR AVE. CLEVELAND 14, OHIO

▲ Mention Item NED-6586 when writing ▲

Make sure your sweeps, dusters and scrubs bear this trademark!

• Pittsburgh's "Lightning Line" pays off in top performance! All demon workers—they dig in with a vengeance! Rough, tough and sturdy, these brushes work harder, better, longer! See this complete line of staple-set brushes at your favorite supplier today.

Staple-Set BRUSHES

BRUSHES · PAINT · GLASS · CHEMICALS · PLASTICS

PITTSBURGH PLATE GLASS COMPANY

▲ Mention Item NED-6587 when writing ▲

PRODUCTION GOES UP! COSTS GO DOWN!

***When you protect your workers with* OLYMPIC GLOVES**

This new glove, the PLASTIGUARD (#630) is covered with a superior plastic coating much better than rubber. Tough but pliable, resistant to abrasion and to virtually all industrial chemicals—including acids, alkalis, oils, etc. Giant size, curved fingers. With knit wrist as shown, also with gauntlets, 12 and 14 inch lengths.

Remember, Olympic has a glove to fit every job!

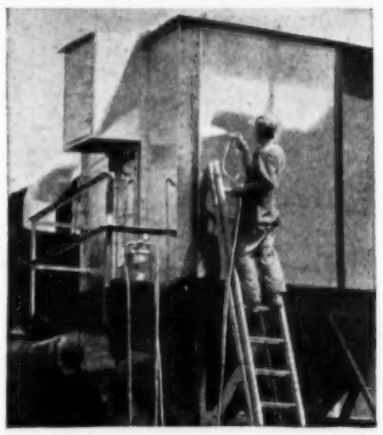
Send for Illustrated Catalog of Safety Work Gloves, Finger Protectors and Safety Apparel

FREE!

OLYMPIC GLOVE COMPANY INC.

95 MADISON AVE., DEPT. 10 NEW YORK 16, N. Y.

▲ Mention Item NED-6588 when writing ▲

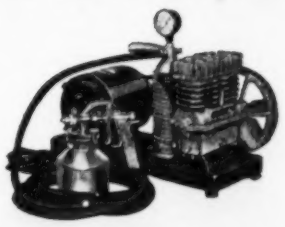


PAINT YOUR PLANT WITH THIS *FOUR* CYLINDER PORTABLE SPRAY PAINTING OUTFIT

Your own maintenance men can do it faster, cheaper and better with

PRESSURE QUEEN

• The only portable air compressor having four cylinders in the space usually required for a single cylinder. Absolutely no pulsation.



Write for Literature

THE CAMPBELL-HAUSFELD COMPANY

193 RAILROAD AVENUE HARRISON, OHIO

▲ Mention Item NED-6589 when writing ▲

Learn more about
LYON-Raymond's New
HYDRAULIC
Pallet Lift Truck . . .

Streamlined!
Lightweight!

Check All These Unusual Features . . .

- FRAME—High strength alloy sheet steel formed into strong box sections.
- AXLES—Heat-treated alloy steel.
- WHEELS—(and other non-structural parts) made from aluminum alloy.
- BEARINGS—Anti-friction bearings used at all important points in lifting mechanism.
- WORKING PARTS—Totally enclosed for better protection.
- WEIGHT—Reduced to a minimum by new design and modern lightweight construction.

Other models of Pallet Lift Trucks available in 4000 lb. and 6000 lb. capacities.

This advanced construction fits this 2000 lb. capacity Lyon-Raymond Hydraulic Pallet Lift Truck to do jobs with speed and ease never before attained by hand pallet trucks. Write today for complete information that may save you time and money!

LYON-Raymond Corporation
4105 Madison St., Greene, N. Y.

Mention Item NED-6591 when writing

K-P Engineered WIRE MESH

SIEVING, SIZING, SEPARATING, STRAINING and FILTERING in ALL INDUSTRIES

Korb-Pettit Wire Mesh is not only first quality in material and workmanship but is engineered for the job involved. Made in all ductile metals, meshes, and weaves, plain or rolled. Also available in abrasion, corrosion and rust resistant metals. *Write for Catalog No. 36.*

KP
"Keeps Promises"

KORB-PETTIT
Wire Fabrics & Iron Works Inc.
Engineers and Manufacturers
1501 North Mascher St.
Philadelphia 22, Pa.

Wire Mesh, Spiral Woven Wire Conveyor Belts, Infra-Red Conveyor Dryers, Leather Finishing and Drying Machines, Industrial Wire Partitions, Machine and Window Guards, Cages, Enclosures, Grilles, etc.

Mention Item NED-6592 when writing

LIGHT
AND EASY TO CARRY
Put it where you need it!

STANDARD LITEWATE
Sectional Roller Conveyor

—ideal for loading and unloading. Handles commodities up to 60 lbs.—moves bags, cases, cartons, hollow bottom, narrow, cleated and irregular packages or articles not suited to wheel conveyors. Less pitch required—operates at grades as little as ¼ in. to ⅜ in. per ft. Interchangeable spacing of rollers—from 1½ in. to 12 in. centers. Available in 10 ft. and 5 ft. straight sections and 90° and 45° curves. Keep LITEWATE conveyors handy in your shipping room—carry a section on your truck. For complete information write for Bulletin NED-99.

STANDARD CONVEYOR COMPANY
North St. Paul 9, Minnesota

Standard
GRAVITY & POWER CONVEYORS

Mention Item NED-6593 when writing

NEW Literature AND Catalogs

Use Inquiry Slip enclosed between pages 4-5 or 68-69 to obtain any of the new literature reviewed on these pages.

Process Measurement & Control

Foxboro Co.—32-page illustrated bulletin No. 427 presents complete line of Dynalog instruments for process measurement and control as well as various auxiliary devices which adapt these instruments to many industrial applications. Measurement of temperature, roll-surface temperature, conductivity, pressure, flow or liquid level, humidity, force, position, pH, speed and other process variables such as power or voltage is explained.

Mention Item NED-6594 when writing

Testing Machine

W. C. Dillon & Co.—16-page illustrated booklet entitled "Dillon Universal Tester" deals with machines for tensile, compression, transverse and shear testing of cloth, wire, steel, brass, plastics, glass, aluminum, springs, wood, rope, canvas, castings, rivets, screws, rubber and adhesives.

Mention Item NED-6595 when writing

Liquid Level Gage

Vapor Recovery Systems Co.—Varec remote reading liquid level gage is described in 8-page illustrated bulletin entitled "Electronic Gauger". Device can be used for one relatively inaccessible tank or for any number of tanks. Readings can be made at tank as well as remote position and can also be made at more than one remote location by installation of receivers at convenient positions.

Mention Item NED-6596 when writing

Silver Brazing Alloy

Central Steel & Wire Co.—Illustrated bulletin No. 14 entitled "How to Repair Broken Cutting Tools with Easy-Flo Silver Brazing Alloy" discusses strength, durability, economy and use of silver brazing alloy in shops, factories and toolrooms.

Mention Item NED-6597 when writing

Carbon-Graphite

United States Graphite Co.—Information on properties, chemical resistance and manufacturing limitations of Graphitar carbon-graphite product is presented in 64-page illustrated wirebound catalog.

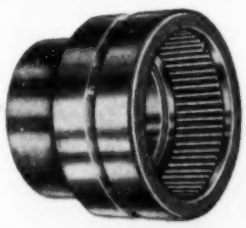
Mention Item NED-6598 when writing

Electric Motors

Allis-Chalmers Mfg. Co.—Design and construction of Safety-Circle motors are discussed in 8-page illustrated bulletin No. 51B6210B. Dripproof and splashproof motors are available in sizes from 1 horsepower at 1800 revolutions per minute to 20 horsepower at 3600 revolutions per minute, in frames 326 and smaller.

Mention Item NED-6599 when writing

Where designs call for "needle bearings"—



Have your "specs" call for
ORANGE ROLLER BUSHINGS

Get
- High load carrying in small space
- Smooth, quiet, even running
- Long, trouble-free operation

Orange Roller Bushings are made to extreme precision standards. They provide highest anti-friction protection on rotating or oscillating parts, large or small, under heavy loads or high speeds—in every kind of equipment from precision machine tools to heaviest equipment. Closer internal running clearances minimize possibility of mis-alignment of rollers. Write for Engineering Data Book giving details.

ORANGE ROLLER BEARING CO., Inc.
568 MAIN ST., ORANGE, N. J.

Mention Item NED-6600 when writing

A New Solenoid Valve
THREE-WAY

NORMALLY OPEN
NORMALLY CLOSED
DIRECTIONAL FLOW

The new 3-way Skinner Diaphragm Type Valves have full ⅜" orifice and ⅜" or ½" N.P.T. ports. All metal internal parts are brass or stainless steel. Soft synthetic inserts prevent leakage—pilot is spring loaded for positive action—diaphragm is tough coated nylon fabric for long life—valve weighs 3¾ lbs.—maximum power consumption, 10 watts. Designed for continuous or intermittent duty with petroleum oils, kerosene, gasoline, water, air and inert gases from 20 to 150 p.s.i. Small in size—large in capacity.

Write today for new free Bulletin No. 493 giving complete data on models and prices.

Skinner ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
135 Belden Ave., Norwalk, Conn.

Mention Item NED-6601 when writing

5 Reasons Why NORTON Vitrified Discs Can Cut Your Grinding Costs—

You get a faster, cooler cutting action on many surfacing jobs with Norton Vitrified "P" or porous type discs, because the grain spacing in these discs is accurately controlled for extra chip clearance and the cutting action is uniform from periphery to hole. This makes them particularly well-suited for handling alloy steel and other heat-sensitive parts.

You get longer life on many surfacing jobs with these Norton discs because vitrified bond has the unique ability of holding the abrasive grain until its complete cutting life has been utilized, and then releasing the grain when it commences to dull.

You eliminate aging and storing problems often encountered with magnesite bonded discs for Norton vitrified bond is stable and mature. These Norton discs are ready for immediate use or may be stored until needed as the grinding properties will remain unchanged.

You eliminate coolant problems, for vitrified bond is not affected by water or any commercial grinding fluid.

You save on initial expense, for vitrified bonded discs in sizes up to 30" in diameter cost considerably less than resinoid.

NORTON COMPANY, WORCESTER 6, MASS.
Distributors in all Principal Cities

W—1255B

NORTON ABRASIVES

Mention Item NED-6602 when writing

A NEW WIRE ROPE HANDBOOK

J&L STEEL

Written for the man on the job

ILLUSTRATED . . . COMPLETE . . . EASY TO UNDERSTAND

This 96-page pocket-sized book tells you about—

- Wire rope installation and operation
- Selection of the correct wire rope
- Standard J&L wire ropes
- Standard fittings, slings, splicings, etc.
- Equipment recommendations.

It's yours for the asking—
WRITE TODAY
FOR YOUR COPY.

JONES & LAUGHLIN STEEL CORPORATION
456 Jones & Laughlin Building • Pittsburgh 19, Pa.

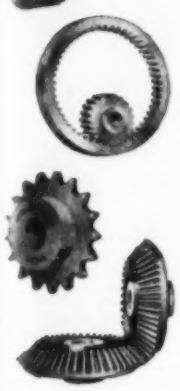
Mention Item NED-6603 when writing

PRECISION GEARS...
"To the Blueprint"
by
"Industrial Gear"

To many gear users the fact that their gears are cut by "Industrial Gear" is sufficient assurance that they are "to the Blueprint"

Putting it plainly *"That's Our Job"* and we have spent years in improving our methods, our machines and our plant layout to give you finer gears—gears that run true, fit better and wear longer. Our machine tool equipment is new and modern, our operators are trained machinists and our supervisors have devoted their lives to cutting gears of superior quality, precision, temper and finish.

We've solved many a tough gear problem and would enjoy solving yours—will you give us the details.



THE PLANT THAT QUALITY AND SERVICE BUILT

INDUSTRIAL GEAR MFG. CO.
4541 VAN BUREN STREET CHICAGO 24, ILLINOIS

Mention Item NED-6604 when writing

Compare DENISON'S
Variable Volume Pumps
with any other make of pump

COMPARE COST of Denison 5000 psi variable-volume pumps with *any others*—even with pumps rated at only *half* their capacity. You'll quickly see the advantages of using Denison pumps wherever you need 5000 psi *or less*. For little or no extra cost, you get the extra efficiency and wear of a pump operating at only *one-half its capacity*.

COMPARE QUIETNESS! Denison pumps are outstandingly *quiet!* Operating noise has been reduced to a negligible factor!

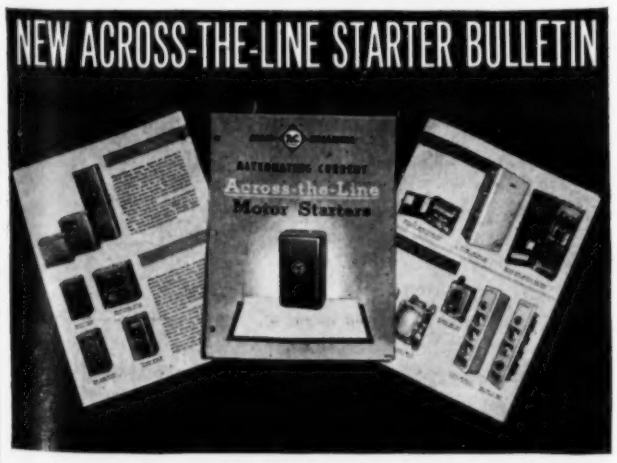
COMPARE COMPACTNESS! Size for size, Denison pumps have no equal! They're easier to adapt to your specific needs. Write for bulletin P-2.

The DENISON ENGINEERING CO.
1151 Dublin Rd., Columbus 16, Ohio

DENISON HydrOILics

Mention Item NED-6605 when writing

NEW ACROSS-THE-LINE STARTER BULLETIN



Describes Allis-Chalmers Starters for Motors Up to 600 Hp

HERE'S DATA on Allis-Chalmers line of general purpose across-the-line starters in NEMA sizes 0 through 7 for squirrel-cage motors or for use as primary switches on wound rotor motors. Available in manual, magnetic, combination, reversing and multi-speed types. Offer dependable operation, easy maintenance and many protective features. Bulletin 14B7132 has details.

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

A-2771

ALLIS-CHALMERS

Mention Item NED-6606 when writing

New Literature – Continued

Use Inquiry Slip enclosed between pages 4-5 or 68-69 to obtain any of the new literature reviewed on these pages.

Electric Connectors

Cannon Electric Development Co.—19 x 24-in. desk chart shows insert arrangements of type K series of electric connectors. Chart contains 211 half-scale layouts with wire, contact and clearance data. Type K connectors are used in aircraft, radio, instruments, radar, television and general electronic and electrical equipment.

Mention Item NED-6607 when writing

Blast Cleaning

American Wheelabrator & Equipment Corp.—16-page illustrated bulletin No. 584 entitled "How Wheelabrating Has Replaced Acid Pickling" describes use of Wheelabrator airless blast cleaning equipment in forge plants, enameling shops, job plating concerns and steel pipe and tubing firms.

Mention Item NED-6608 when writing

Industrial Equipment

Acme Equipment Co.—28-page illustrated bulletin No. 92 contains descriptions and prices of fire extinguishers; fork and platform lift trucks; electric, pneumatic and chain hoists; gas and electric cranes; air compressors; flexible shaft grinders; dust collectors; plant and maintenance equipment; heat treating and melting furnaces; pumps; scales and electrical equipment.

Mention Item NED-6609 when writing

Portable Conveyors

J. C. Corrigan Co.—36-page illustrated catalog No. 102 provides information on portable conveyors and stackers to handle bulk material, bags, boxes, crates, cartons and kegs.

Mention Item NED-6610 when writing

Radioactive Tracers

Arthur D. Little, Inc.—14-page booklet entitled "Industrial Uses of Radioactive Materials—A Selected Bibliography" provides information on general background references, survey articles of industrial application and references dealing with specific fields.

Mention Item NED-6611 when writing

Dehydrating Equipment

Allen-Sherman-Hoff Co.—8-page illustrated catalog No. 1240 explains use of dehydrating Hydro-Bin and type C water collecting gate for use with ashes, coke and other materials.

Mention Item NED-6612 when writing

Asbestos Insulated Wire

National Electric Products Corp.—34-page illustrated catalog No. 509 entitled "NEasbestus Wire for Hot Spots" covers wires and cables which have asbestos or asbestos and varnished-cambric insulation. Wires and cables are suitable for electrical installations where extreme heat, corrosive fumes and fire hazards are present.

Mention Item NED-6613 when writing

RECLAIMING WELDING FLUX WITH VACUUM

A new method of automatic arc welding leaves a residue of unfused flux which can be reclaimed and used again if separated from the slag. Spencer Vacuum is used for the hand pick-up of the residue on the 20 foot diameter pipe shown, separates the slag and deposits the valuable flux in a container. In another plant, a fifty foot pipe seven feet in diameter is welded by an automatic welder riding inside the pipe. The welder is followed by a helper who scrapes off the flux and picks it up with Spencer Vacuum. The same crew does a weld in four minutes instead of 22 minutes formerly and the salvage of flux paid for the Spencer equipment in one year.

356-R

150 USES FOR VACUUM...ASK FOR BULLETIN
SPENCER VACUUM CLEANING
HARTFORD
THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.

Mention Item NED-6614 when writing

New GENERAL FILTER
for Hydraulic and Lubricating Oils

NO CARTRIDGES TO REPLACE

There are no expensive cartridges to throw away or stock. Entire unit is cleanable. First cost is only cost.

EASY TO CLEAN

Just remove one nut and all spacers and screens slide off. Wash in suitable solvent and replace. It's as simple as that.

FILTRATION TO SUIT EVERY APPLICATION

Write! for prices and specifications. Describe your application.

This Model 1300 GENERAL FILTER can be made to filter solids from .040 inch to 5 microns by varying the mesh of the filtering screens. Comes in two standard lengths, 8 inches and 4 inches, but can be made any length to provide capacity between 5 and 50 gallons per minute.

GENERAL FILTERS, Inc.
12890 WESTWOOD — DETROIT 23, MICH.

Mention Item NED-6615 when writing

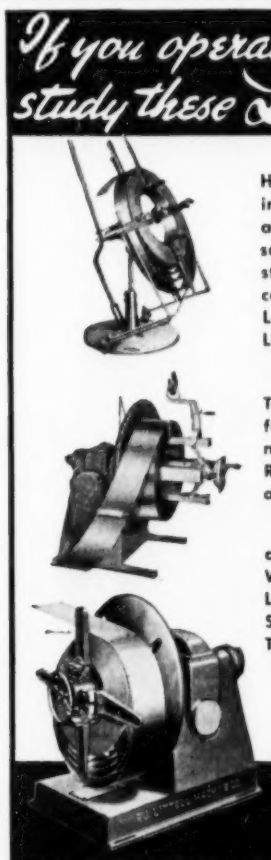
No two jobs are exactly alike—that's why Union Special builds a wide variety of bag closing equipment. It's also the reason why Union Special field representatives make a careful study of requirements before giving you detailed recommendations on the kind of equipment to install. If it's "Union Special," it's right for the job! UNION SPECIAL MACHINE COMPANY, 416 North Franklin Street, Chicago 10, Illinois.

Style 14500R
Suspended Head Utility Bag Closing Machine

Union Special
Bag Closing Machines

Mention Item NED-6616 when writing

If you operate a Press Room study these Littell REELS



HERE'S the way to speed up blanking, cupping, etc. Littell Reels enable you to use time-saving, money-saving coil stock in place of sheet stock. No more lost motion for continual insertion of new sheets. Less scrap, too. One operator using Littell Reels can tend several presses.

Littell Reels are self-centering. The heavy coil is always balanced for smooth, effortless feeding. They never over-run. Heads on No. 10 Reel and smaller are adjustable to any angle. Quick loading.

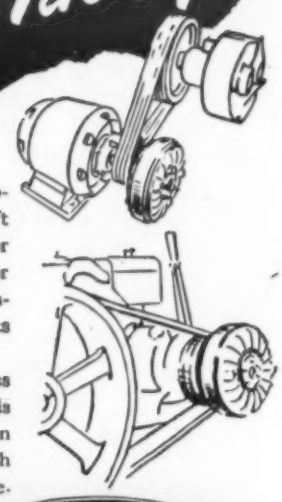
The Reels pictured are only three among dozens of Littell models. Write today for full details on Littell Reels, Feeds, Air-Blast Valves, Scrap Winders, etc. REQUEST BULLETINS.

Top—No. 3 Reel, 300 lbs. capacity. *Center*—No. 25 Reel, 2500 lbs. capacity. *Bottom* — No. 60 Reel, 6000 lbs. capacity.

F. J. LITTELL MACHINE CO.
4161 RAVENSWOOD AVE., CHICAGO 13, ILL.

Mention Item NED-6617 when writing

New Hydraulic Power Package



● Attach a Twin Disc Hydro-Sheave Drive to the output shaft of your ¾ to 25 hp electric motor or internal combustion engine for smooth hydraulic power transmission. It will eliminate jerky starts and engine stalling.

A complete package unit, less sheave, the Hydro-Sheave Drive is designed for use with Worthington QD Sheaves, but can be used with a chain sprocket of the plate type. Write for Bulletin 145-A.

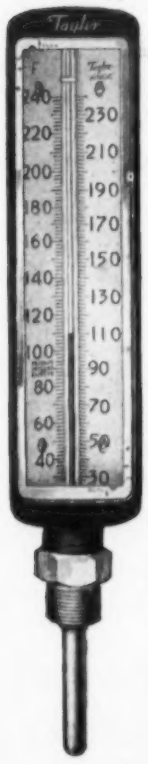
TWIN DISC CLUTCH CO., Racine, Wisconsin.

TWIN DISC HYDRO-SHEAVE DRIVES

TWIN DISC CLUTCH COMPANY • Hydraulic Division • Rockford, Illinois

Mention Item NED-6618 when writing

WHY YOU'RE BETTER OFF
with a Taylor Thermometer



THERE *are* differences in Thermometers! And we recommend that you choose the one which will give you the accuracy and life-long performance that you pay for!

Here are only a few reasons why we believe you will choose Taylor Mercury-in-Glass Industrial Thermometers to obtain outstanding precision and real "beyond-the-average" service. Every Taylor Thermometer has:

1. Microscopic Thermometer Bore-Selection—which insures a more uniform accuracy throughout the scale.

2. Individually Graduated Scales—so that each Thermometer will give an accuracy of plus or minus 1% of the graduated scale.

3. Triple-Distilled Mercury—which eliminates any danger of foreign particles interfering with accuracy in reading.

4. Easier to Read—wide angle vision, BINOC tubing and bold, vivid mercury column, open-scale graduations and figures clearly visible even in dimly lit locations.

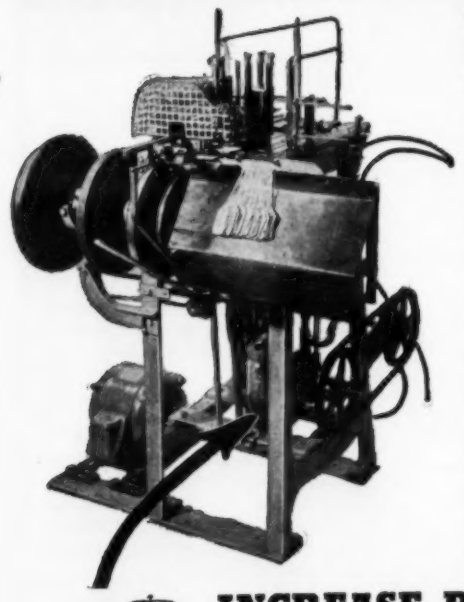
5. Built-In Resistance Against Shock—each glass tube undergoes an annealing treatment to eliminate strains and to give more positive resistance against thermal and mechanical shock in everyday use.

6. Taylor Mercury-in-Glass Thermometers—are offered in a wide variety of forms and in temperature ranges within limits of −40 to +950° Fahrenheit or equivalent Centigrade.

Order yours now! Know that your processing is accurately protected! Taylor Instrument Companies, Rochester, N.Y., and Toronto, Canada.

Mention Item NED-6619 when writing

LEIMAN BROS. ROTARY VACUUM PUMPS



String More Tags—Feed More Sheets
Do More of Anything in Any Machine or Process
Less Cost per day of service

INCREASE PROFITS *with better work and more of it with* **LEIMAN VACUUM PUMPS**

Submit your problem

LEIMAN BROS., INC. 167 CHRISTIE ST. NEWARK 5, N. J.

Mention Item NED-6620 when writing

New Literature – Continued

Use Inquiry Slip enclosed between pages 4-5 or 68-69 to obtain any of the new literature reviewed on these pages.

Pipe Insulation

Owens-Illinois Glass Co., Kaylo Div.—Complete information on Kaylo calcium silicate pipe insulation for temperatures from 200 to 1200° F is provided in 4-page illustrated folder.

Mention Item NED-6621 when writing

Gas Combustion Equipment

Affiliated Gas Equipment, Inc., Bryant Industrial Div. —Capacity and dimensional tables are included in illustrated catalog No. 292 which describes gas combustion assemblies, gas-air and air-gas mixers, blowers and boosters, burners, pilot and ignition devices, controls, valves, regulators and other accessories.

Mention Item NED-6622 when writing

Variable Speed Drive

Louis Allis Co.—12-page illustrated bulletin No. 611-D describes Ajusto-Spede alternating current variable speed drive which is especially suited for driving such equipment as calenders, printing presses, paper and metal slitters, conveyors and any other variable speed machine requiring constant torque input throughout its operating speed range.

Mention Item NED-6623 when writing

Sectional Conveyor

George Haiss Mfg. Co.—8-page illustrated catalog No. H-487 presents features of model 487 sectional conveyor which can be used with flat belt or trough belt on any type of portable or stationary mounting. Made with lattice or channel frames, conveyors are recommended for crushed stone, gravel, sand, coal, aglime, ore, concrete and similar materials.

Mention Item NED-6624 when writing

Sprockets

Diamond Chain Co.—40-page illustrated catalog No. 709 describes enlarged line of various types of stock sprockets and of single and multiple-strand roller chains. Data for selection of sprockets and chains, dimensions and prices are included.

Mention Item NED-6625 when writing

Perforated Materials

Accurate Perforating Co.—More than 100 types of industrial and ornamental perforations are described in illustrated 26-page catalog No. 6. Detailed engineering information is given on how to specify perforating for metal, paper, cardboard, Masonite and plastics.

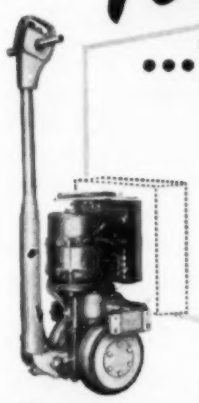
Mention Item NED-6626 when writing

Pigments & Extenders

C. K. Williams & Co.—8-page price list N contains simplified listings on complete line of pigments and extenders. Coding indicates basic characteristics of each product.

Mention Item NED-6627 when writing

Hitch this efficient "Power Package" ...to practically any load!



Motorize your movable equipment with this trouble-free Stuebing-Engineered Prime-mover!

For castered or other movable equipment investigate the Stuebing "Power Package". The complete power unit from the Hydro*Lectric* "K" Lift Truck, the "Power Package" includes twin wheel drive, heavy duty motor, two speeds forward, two in reverse and dynamic brake. It's like an outboard motor . . . adaptable to many moving jobs. Capacity rated at 200-500 pound draw bar pull.

Performance proved in the HydroLectric 'K' Lift Truck for more than 10 years.

Let Stuebing engineers show you how the "Power Package" fits your moving problems.

For specifications write for Bulletin G.

LIFT TRUCKS, INC.
Walter Stuebing, *President*
2425 Spring Grove Ave. Cincinnati 14, Ohio

Mention Item NED-6628 when writing

Hot – but not bothered

RESIN-BONDED SPEED-WET METALITE® DISCS

Grinding heat can't affect the grain-grip of their resin bond. It retards loading, eliminates shedding, and keeps every grain cutting. Moreover, SPEED-WET METALITE Fibre Discs have a tough, all-fibre backing with the liveliness of spring steel. Get the extra "cutting mileage" of SPEED-WET METALITE Fibre Discs. A demonstration will convince you — write.

RESIN-BONDED RESINALL METALITE® BELTS

They beat the heat in fast, continuous heavy-duty grinding. The heat-set resin bond can't melt, can't get "tacky," pick up chips, load or glaze. This belt cuts sharp and keeps on cutting sharp. There is 2 to 4 times more production with a RESINALL METALITE Cloth Belt. Try it out in your own shop —ask for a demonstration by a Behr-Manning Field Engineer.

BEHR-MANNING · TROY, N.Y.
NORTON abrasives ®
ALSO QUALITY OILSTONES FOR INDUSTRIAL NEEDS

Mention Item NED-6629 when writing

SPRING PRESSES

POWER AND FOOT OPERATED

For riveting, staking, stamping and similar operations on small light parts. Constructed to compensate for variation in thickness of the work and to deliver a UNIFORM BLOW AT EVERY STROKE.

M-110 (illustrated) motor driven to eliminate fatigue factor of foot operated press — similar press M-130, equipped to operate by compressed air.

SEND FOR BULLETIN

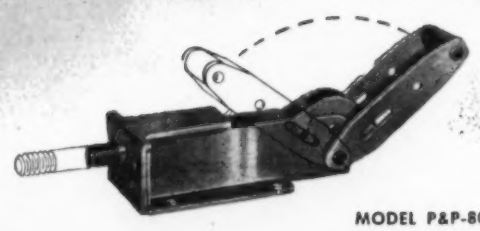
EST. TF 1834

THE TAYLOR & FENN CO. HARTFORD 1, CONN.

Mention Item NED-6630 when writing

USE THIS *New Type* CLAMP

for places where conventional clamps will not operate



MODEL P&P-800

One of the outstanding features of THIS PUSH AND PULL CLAMP (Model P&P-800) is its ability to exert a pressure up to 800 pounds during the entire 1¼" travel of plunger in either direction. It automatically locks itself at completion of handle swing.

Can be mounted on bottom or front at any angle. Model P&PS-800 has dual straight flanges for straddle mounting.

Plunger has ⅜-24 external and ¼-28 internal threads for choice of adaptation.

KNU-VISE PRODUCTS **LAPEER MFG. CO.**
3056 DAVISON ROAD • LAPEER, MICHIGAN

Mention Item NED-6631 when writing

DON'T BLAME THE PAINT

OSPHO

Is the Answer to Painting RUSTED SURFACES

An application of OSPHO (Phosphate-Chromate Primer) applied directly over rusted metal STOPS RUST ACTION AND PRIMES METAL FOR PAINT!!!

You don't have to remove the rust—just apply OSPHO—let dry and apply paint. OSPHO saves cost of removing rust—paint jobs last twice as long, and it is inexpensive.

Place a trial order today. Recommended by paint manufacturers.

1 Gallon $3.00
10 Gallon Kegs . . $2.80
50 Gallon Barrels . $2.60
F. O. B. Cleveland

RUSTICIDE PRODUCTS COMPANY
3127 Perkins Ave. • Cleveland 14, Ohio

OSPHO FIRST MAKES PAINT JOBS LAST

▲ Mention Item NED-6632 when writing ▲

Want to Start Something?

You'll get better performance from fractional horsepower motors with this C-H 9101

Few devices achieve the tremendous popularity of the Cutler-Hammer Bulletin 9101 fractional horsepower motor control unit. It is the ideal starter for those millions of "little" motors that drive small machine tools, woodworking machines, pumps, fans, blowers, a vast array of both industrial and household tools and appliances.

C-H 9101 starter is the preferred control for these jobs because it is sturdy, has fine appearance, and offers simple foolproof operation with positive overload protection . . . *all* at a low price. It incorporates the famous C-H Eutectic Alloy Overload Relay; dependable, accurate, unchanging, trip-free on overloads. Rating changed by changing heater coils. Twin break silver contacts, quick make and quick break. NEMA type 1 enclosure with ample knockouts top and bottom. Also NEMA 4 and 5 enclosures with tapped conduit holes. Removable mechanism. Measures approx. 2½ x 2½ x 4⅜. Try a C-H 9101 and *see* the difference. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ontario.

CUTLER-HAMMER MOTOR CONTROL C-H

▲ Mention Item NED-6633 when writing ▲

New Literature—Continued

Use Inquiry Slip enclosed between pages 4-5 or 68-69 to obtain any of the new literature reviewed on these pages.

Piston & Shaft Packings

C. W. Marsh Co.—Proper methods of applying leather V-type packings on reciprocating shafts and pistons are explained diagrammatically in 6-page illustrated bulletin "Marsh Thermo Vee Packings". Instructions are given on determining sizes of packings and recommended adapters.

▲ Mention Item NED-6634 when writing ▲

Steel Castings

Steel Founders' Society of America—34-page illustrated brochure entitled "The Steel Castings Industry" discusses design advantages, economy and dependability of steel castings. Word and picture descriptions of steel castings used to solve specific problems and meet critical requirements of various industries are included.

▲ Mention Item NED-6635 when writing ▲

Fire Prevention & Protection

Fire Protection Institute—30-page booklet entitled "Facts about Fire" discusses deaths by fire, annual fire losses in United States, industrial and mercantile fires, industrial fire brigades, fires and fire extinguishers, importance of fire prevention and protection, and basic rules of fire safety.

▲ Mention Item NED-6636 when writing ▲

Vacuum Coating Equipment

Distillation Products, Inc.—12-page illustrated booklet entitled "Vaporized Metal-Coatings by High Vacuum" presents explanation of evaporation of metals and other solids. Applications, advantages and limitations are set forth in detail.

▲ Mention Item NED-6637 when writing ▲

Industrial Flotation

Denver Equipment Co.—22-page illustrated bulletin No. F-10—B-29 explains how froth flotation process is used in many industries. Applications include mineral recovery, de-inking paper pulp, recovering oils and processing refuse.

▲ Mention Item NED-6638 when writing ▲

Pipe Fittings

Union Malleable Mfg. Co.—Catalog No. 50 illustrates and describes malleable iron pipe fittings, cast solder joint fittings and steel nipples. Various steps in manufacturing process are shown, and list prices and weights are given also.

▲ Mention Item NED-6639 when writing ▲

Material Conveyors

Hapman Conveyors, Inc.—40-page illustrated catalog No. 5000 covers pipe conveyors and accessories. Included are engineering drawings of typical systems for flour, dust, coal, sand, flux, spent grains and sludge handling. Capacity charts are given also.

▲ Mention Item NED-6640 when writing ▲

nyb GENERAL INDUSTRIAL and HEAT FANS

For dust and gas removal, conveying of materials and handling of hot air and gases in industrial processes.

ALL-WELDED CONSTRUCTION

Cast steel spiders, with welded blades. Housings, drives, both pulley and direct, and discharge arrangements to meet any requirement. 13 sizes. Wheel diameters from 14 to 66 inch. All sizes rotatable and reversible. Capacities from 450 CFM to 60,500 CFM.

No. 10 size equipped with manganese bronze wheel as standard. Spark-proof and acid-resistant. For use in hazardous locations where explosive air mixtures are to be handled.

Write for Bulletin 482

nyb THE NEW YORK BLOWER COMPANY
GENERAL OFFICES • 3170 SO. SHIELDS AVE. • CHICAGO 16
FACTORIES AT LAPORTE, IND. AND CHICAGO, ILL.

▲ Mention Item NED-6641 when writing ▲

Something NEW! Volatile Solvent

CARBON MET

A HALOGENATED AROMATIC HYDROCARBON

A specific replacement for toxic Carbon Tetrachloride

U. S. PAT. 2318842

Out and out metal dry cleaning solvent and degreaser in ready-to-use "Handy Kit" containing Patented dip and drier basket.*

- Quick Cutting solvent against stubborn dirt and grease.
- Non-Explosive and relatively non-toxic.
- Non-Corrosive to metals.
- Fast, clean evaporation.
- Non-Ionic . . . ideal for degreasing and cleaning electrical parts.

MUCH FASTER CUTTING THEN "CARBON TET" . . . CAUSES NO RUSTING . . . LEAVES NO FILM

*also economical 55 gal. size drum kit.

Sold by industrial jobbers everywhere. Shipped *"Prepaid"* Express, if your jobber is out of stock.

IMMEDIATE DELIVERY 1 GALLON OR A TANK CAR

CURRAN CORP. Mfg. Chemists LAWRENCE, MASS.
120 South Canal St.

▲ Mention Item NED-6642 when writing ▲

FLEXLOC

ONE-PIECE SELF-LOCKING NUTS

WON'T SHAKE LOOSE . . REDUCE MAINTENANCE

Invariably, when nuts loosen, they cause shutdowns, loss of production, and bad tempers all around. All this can readily be eliminated by installing the one-piece, self-locking "FLEXLOC," because *it positively will not shake loose* and positively cuts cost of maintenance.

The all-metal, one-piece resilient "FLEXLOC" is becoming increasingly popular, because it is processed to have an exceptionally uniform torque and, because it packs a stop, lock and plain nut all in one. "FLEXLOC" accommodates itself to a wide range of thread tolerances and can be used over and over again without losing much of its torque. And, being a stop nut, it stays locked in any position on a threaded member. It is not affected by temperatures commonly met within the industrial field of Mechanical Engineering.

Available in "thin" and "regular" types—in sizes from No. 6 to 2 in. in diameter—in NC and NF thread series. Write for your copy of the "FLEXLOC" Catalog.

OVER 46 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNSYLVANIA, BOX 581
CHICAGO • DETROIT • ST. LOUIS • SAN FRANCISCO

▲ Mention Item NED-6643 when writing ▲

GOOD NEWS!

ABOUT STAINLESS CLAD STEEL

GET YOUR FREE COPY OF THIS INFORMATIVE BOOKLET TODAY

WRITE TO DEPT. P5

The Finer The Finish The Finer The Product For The Finest Finish Use PERMACLAD

PERMACLAD
STAINLESS CLAD STEEL

A PRODUCT OF: ALAN WOOD STEEL COMPANY
Conshohocken, Penna.

OTHER PRODUCTS: A W Super Grip, Abrasive Floor Plate. • A W Super-Diamond Floor Plate • Billets • Plates • Sheets (Alloy and special grades).

▲ Mention Item NED-6644 when writing ▲

Standard for Industry

SINCE 1899

Kester is constantly developing new and better flux-core solders. At present there are over 100,000 different types and sizes.

WRITE FOR FREE TECHNICAL MANUAL, "SOLDER and Soldering Technique"

KESTER SOLDER COMPANY
4201 Wrightwood Avenue
Chicago 39, Illinois
Factories Also At Newark, New Jersey • Brantford, Canada

KESTER SOLDER

▲ Mention Item NED-6651 when writing ▲

You don't have to be BIG to be EFFICIENT!

847580

New UNLOADER-LOADER Team For All Materials — All Sizes of Plants

The new B-G 363 Unloader-Stockpiler-Loader is an all-purpose machine; handles all bulk materials—up to 200 T.P.H. Also handles bagged and packaged goods. All new, heavy duty, highly portable! The 358 Hopper Car Unloader clears a car of material in 45 minutes! Positive, non-slip hopper-bottom car unloading for all bulk materials. Easy to spot over rails or in pits. Truck-towed portability.

Send for new Bulletins! On the 24" Belt Conveyor, Bulletin 363. On the Hopper Car Unloader, Bulletin 358. Address

Barber-Greene Company
Aurora, Illinois

▲ Mention Item NED-6652 when writing ▲

BLACK DIAMOND
PRECISION DRILL GRINDER

FOR THE PARTICULAR JOB OF SHARPENING SMALL DRILLS — AT 50% SAVINGS

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are reduced to an absolute minimum.

Anyone can operate a Black Diamond. Even the most inexperienced can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity of small drills ready for use. You should own a Black Diamond. Write for Details.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ Mention Item NED-6653 when writing ▲

New Literature — Continued

Use Inquiry Slip enclosed between pages 4-5 or 68-69 to obtain any of the new literature reviewed on these pages.

Tap Driving Equipment

Scully-Jones & Co.—20-page illustrated folder No. 123-1 is descriptive of standard tap chucks, heavy duty tap holders, spring compression tap holders, tension and compression tap holders, floating tap driver holders and close center tap drivers for use in machines having spindle, holder or attachment with Morse taper hole; multiple tapping machines and spindle types made to accommodate standard adjustable adapter assemblies.

▲ Mention Item NED-6654 when writing ▲

Liquid Gravity Instruments

American Recording Chart Co.—8-page illustrated bulletin No. 111R explains details of standard Arcco-Anubis gravitometer which records specific gravity of continuously flowing sample of liquid under actual line operating conditions. Also described is recording-controlling liquid gravitometer for controlling or blending of two or more liquid products.

▲ Mention Item NED-6655 when writing ▲

Connectors

Cannon Electric Development Co.—Illustrated charts show Army-Navy connector specifications and contain insert-layouts with information as to latest service voltages and alternate insert positions. Desk chart, measuring 17 x 22 in., showing insert arrangements in half scale, and full scale chart measuring 38 x 50 in. are available.

▲ Mention Item NED-6656 when writing ▲

Hydraulic Equipment

Denison Engineering Co.—12-page illustrated bulletin No. 135 describes plant facilities and products. Among products shown is Multipress all-purpose press in 1 to 35-ton capacities for broaching, trimming, marking, staking, blanking, assembling, crimping, riveting, forming and compacting operations. Pumps, valves, fluid motors and pumping units are described briefly.

▲ Mention Item NED-6657 when writing ▲

Low Voltage Control System

Square D Co.—16-page illustrated manual entitled "Low Voltage Control" is descriptive of easily installed low voltage system designed to give commercial or industrial user more light control points conveniently located.

▲ Mention Item NED-6658 when writing ▲

Solenoid Air Valves

Valvair Corp.—Single and double solenoid valves for air pressures up to 125 psi. are described in 4-page illustrated folder S. All sizes are available for 110, 220 and 440 v in both 50-60 and 25-cycle current.

▲ Mention Item NED-6659 when writing ▲

Electric Control Devices

Ward Leonard Electric Co.—8-page illustrated bulletin No. 100,000 provides information on rheostats, resistors, relays, starters, speed regulators, dimmers, contactors and pushbutton stations.

▲ Mention Item NED-6660 when writing ▲

Abrasive Wheels

Simonds Abrasive Co.—4-page illustrated bulletin ESA-186 describes Fibrex Red synthetic-resin-bonded grinding wheels. Depressed center wheels for use on portable disk sanders and right-angle type portable grinders are available in 7 and 9-in. diameters. Straight wheels for cut-off machines and all-purpose use are available in 6, 8, 10, 12 and 14-in. diameters.

▲ Mention Item NED-6661 when writing ▲

Automotive Chain Drive

Link-Belt Co.—36-page illustrated booklet No. 2065 describes silent chain drives for automotive and industrial engines. Data included in booklet aid in designing cam shaft drives for internal combustion engines and in laying out efficient driving connections between all types of shafts, compressors, pumps, blowers and generators.

▲ Mention Item NED-6662 when writing ▲

Conduit, Wire & Cable

Triangle Conduit & Cable Co.—Included in products listed in 12-page illustrated catalog No. 49 are Glazon building wire, Triex nonmetallic sheathed cable, Trioseal building wire, Tricon control wire, Trioprene nonmetallic trench cable and various types of service entrance, lead covered, varnished cambric, power and parkway cable. Specifications are given for double bushed and bonded armored cable, Tristeel flexible steel conduit, rigid steel conduit and hot-dip galvanized electrical metallic tubing.

▲ Mention Item NED-6663 when writing ▲

"There Must be Something Wrong Here, Boys"

And There Is . . . . . if someone hasn't found the way to CUT HANDLING COSTS IN HALF!

Do you know that many large concerns have hit on almost a magic formula that gives quick relief from the headaches of rising costs? They found a way to CUT HANDLING COSTS IN HALF. *That way*, is the Automatic Electric Truck way.

These amazing electric trucks lift, move and stack your material ceiling high with easy, finger-tip operation . . . hundreds of pounds, or tons. One operator handles more material than three workers could by antiquated manual handling methods, releasing two men for more productive work.

So when your cost figures call for a showdown, instead of saying: "*There must be something wrong here, boys*," consider *how much* Automatic's 5-to-1 *saving in handling* costs could change your top-heavy costs picture.

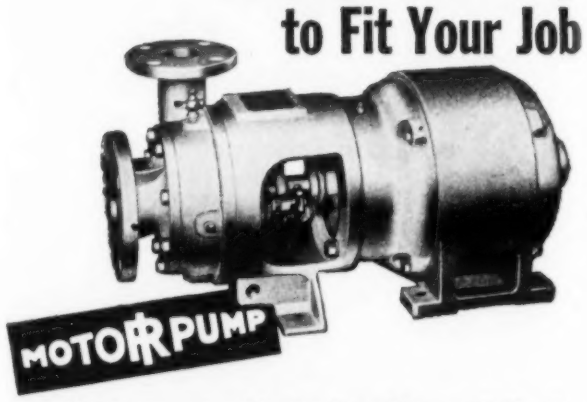
Write for all the facts . . . and then you'll see why Automatic equipment is *not* a capital expenditure, but a money-making, cost-cutting *bonus, every time* you handle material!

Trade Automatic Mark
61 W. 87th St., Dept. P-9, Chicago 20, Ill.

Automatic ELECTRIC TRUCKS
Lighten LIFE'S LOADS

▲ Mention Item NED-6664 when writing ▲

We Have the Pump to Fit Your Job



Here's one of a big family of Ingersoll-Rand MOTORPUMPS that is being used to step up productive efficiency in applications such as supplying boiler feed, condensate return, coolant circulation, washing and cleaning operations, handling brine, gasoline, bulk oil, waste water and many others.

MOTORPUMPS are available in sizes from ½ to 50 h.p. discharging 5 to 1800 g.p.m. Make it a point to ask our nearest branch office for full details.

Ingersoll-Rand
11 Broadway, New York 4, N. Y.

309-9

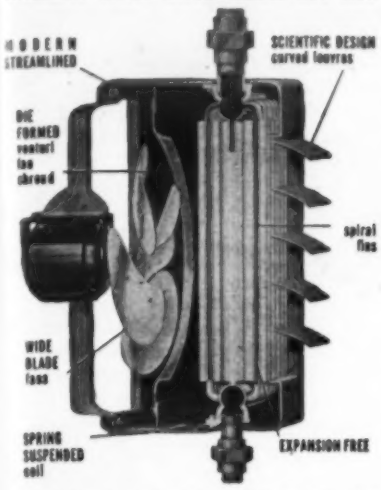
▲ Mention Item NED-6665 when writing ▲

14 UNION ST. · MERCER, PENNA.

▲ Mention Item NED-6666 when writing ▲

Unit Heater . . sets new standard of quietness and heating efficiency

McCord Unit Heaters are a time proven product embodying design based on years of experience in the heat transfer field. These units are not only rugged in design and guaranteed for use on #150 p.s.i. steam pressure but are made attractive in appearance. Two outstanding features appeal to maintenance engineers—we use standard motors with standard bases which quickly permits the use of replacement motors should a motor fail in service—the heating element is made of individual spiral fin tubes which are free to expand independently without putting a strain on the brazed joints. The entire heating unit is spring suspended and floats free in the casing, eliminating rigid connections. Improved type fan blades deliver large volumes of air with minimum air noise and vibration which makes these units suitable for office and store use. A complete line of vertical projection type unit heaters and blast coils are also available. Catalog on request or write for new folder "Instructions for Maintenance of Unit Heaters," **McCord Corporation,** Detroit, Mich. *Advt.*



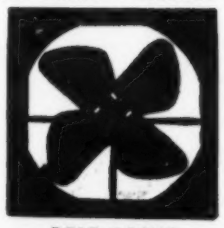
▲ Mention Item **NED-6667** when writing ▲

Give your losses an AIRING!

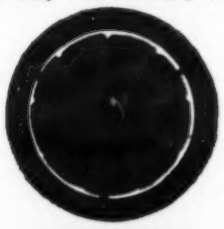
● FATIGUE LOSS ● ABSENTEEISM ● LOW MORALE ● INEFFICIENCY

Air *in motion* keeps people *in action* . . . alert, efficient! It *pays* to ventilate with Exhaust and Ventilating fans by Emerson-Electric . . . leaders in the fan industry for 58 years. See your contractor, or write for free Bulletin No. T-113.

THE EMERSON ELECTRIC MFG. CO., • St. Louis 21, Mo.



BELT-DRIVE exhaust fans come in 24, 30, 36, 42 and 48-inch sizes, exhausting up to 19,350 CFM.

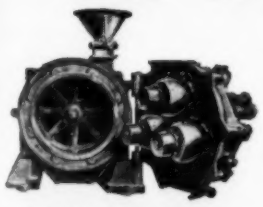


DIRECT-DRIVE exhaust fans are available in 5 sizes, from 12 to 30 inches, with ball- or sleeve-bearing motors.

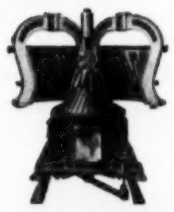
EMERSON ELECTRIC MOTORS • FANS APPLIANCES

▲ Mention Item **NED-6668** when writing ▲

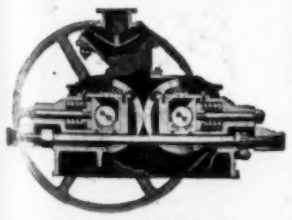
STURTEVANT EQUIPMENT INCREASES PRODUCTION AND CUTS COSTS



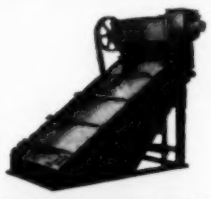
RING-ROLL MILLS for medium and fine reduction 10 to 200 mesh, hard or soft materials. Very durable, small power. Operate in closed circuit with Screen or Air Separator. Open door accessibility. Many sizes. No scrapers, plows, or pushers.



ROTARY FINE CRUSHERS for intermediate and fine reduction down to ¼". Open door accessibility. Soft or moderately hard materials. Efficient granulators. Excellent preliminary Crushers preceding Pulverizers.



CRUSHING ROLLS for granulation, coarse or fine, hard or soft materials. Automatic adjustments. Crushing shocks balanced. For dry or wet reduction. Sizes 8x5 to 38x20. The standard for abrasives.



MOTO-VIBRO SCREENS screen anything screenable. Classified vibrations. Unit construction — any capacity. Open door accessibility. Open and closed models with or without feeders. Many types and sizes — range of work ½ inch to 60 mesh.

Sturtevant Mill Company, 114 Clayton St., Boston 22, Mass.

▲ Mention Item **NED-6669** when writing ▲

New Literature — Continued

Use Inquiry Slip enclosed between pages 4-5 or 68-69 to obtain any of the new literature reviewed on these pages.

Acoustical Materials

Owens-Corning Fiberglas Corp.—8-page illustrated bulletin No. 39-B covers forms, properties and methods of installing Fiberglas acoustical materials, including plain and perforated tile and board. Use of Fiberglas thermal insulations for acoustical purposes is also described.

▲ Mention Item **NED-6670** when writing ▲

Industrial Buildings

McCloskey Co. of Pittsburgh—8-page illustrated catalog entitled "The McCloskey Story" describes Rigidsteel design principle for economical building construction. Design affords speedy construction without network of trusses.

▲ Mention Item **NED-6671** when writing ▲

V-Belt Drives

T. B. Wood's Sons Co.—96-page illustrated catalog No. 192 is descriptive of Sure-Grip stock and special drives, sheaves and V-belts and provides stock drive tables, engineering data and examples to aid in selection of proper V-belt drive.

▲ Mention Item **NED-6672** when writing ▲

Plugs, Receptacles & Cord Connectors

Russell & Stoll Co.—12-page illustrated catalog No. EL49-189 describes features of automatic locking Midget Ever-Lok plugs, receptacles and cord connectors for use as components in all types of portable electrical equipment such as recorders, communication and sound equipment, light electric drills and x-ray apparatus.

▲ Mention Item **NED-6673** when writing ▲

Valves & Fittings

Kohler Co.—20-page illustrated catalog entitled "Precision Parts" describes check valves, jet engine controls, on-off valves, angle needle and instrument vacuum control valves, engine primers, plug valves and various flared tube, bulkhead, pipe thread and hose nipple fittings.

▲ Mention Item **NED-6674** when writing ▲

Electrical Contacts

Fansteel Metallurgical Corp.—2-page illustrated, bulletin No. 7.801 lists 60 standard sizes of solid fine silver electrical contact rivets available for immediate delivery. Included in list are flat and radius faced rivets with head diameters ranging from 0.093 to 0.250-in., with shank diameters and lengths suitable for most assembly requirements.

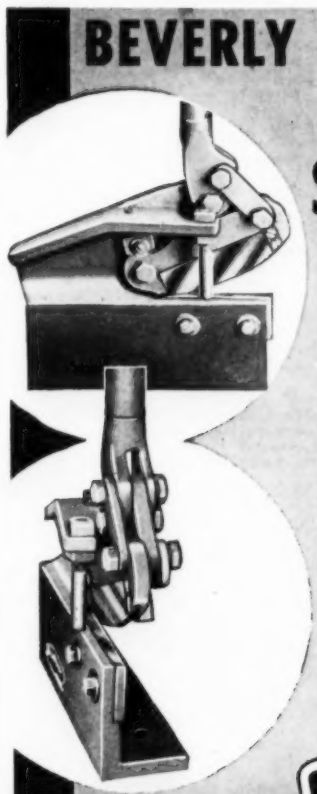
▲ Mention Item **NED-6675** when writing ▲

Visual Oilers

Gits Bros. Mfg. Co.—8-page illustrated booklet entitled "Gits Visual Oilers" covers capacities, threads, dimensions and prices of gravity feed, wick feed, constant level, vibrating rod and multiple oilers. Reservoirs, molded in clear unbreakable plastic to withstand hard usage and varying temperatures, are among features described.

▲ Mention Item **NED-6676** when writing ▲

BEVERLY Slitting SHEAR



"S-3" Slitting Shears for slitting, cutting and trimming sheet steel or any other material, have compound power transmission, which provides smooth, easy operation. Interchangeable and adjustable blades of high quality tempered and drawn tool steel are firmly held in alignment by the rigid frame to assure clean cutting, regardless of the thickness of metal—up to capacity. Unique adjustable shoe, bearing on upper blade holder, provides additional support, for the upper blade, which increases the strength and cutting efficiency of the Shear.

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Ask your Beverly Dealer for a demonstration or write for full details and illustrated circular.

High Carbon High Chrome Blades for cutting stainless available on special order.

The BEVERLY SHEAR MFG. Co. 3016 W. 111th St. Chicago 43, Ill.

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▲ Mention Item **NED-6678** when writing ▲

HOUGHTON'S ABSORBED OILS

100 — 500 SERIES

offer you these advantages:

1. High melting point.
2. Maximum stability—no tendency to separate, gum or harden.
3. High in lubricating ability and in adhesion to metal surfaces.
4. Anti-corrosive; neutral in reaction; free from moisture.

Houghton's Absorbed Oils are made to provide an effective lubricating film between the balls or rollers and their retaining cages. These are reversible soda-soap greases which may be heated and cooled repeatedly without change. Write for folder.

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▲ Mention Item **NED-6679** when writing ▲

new sander

PORTABLE ELECTRIC

STERLING **century** SANDER

Easiest-to-use, fastest, safest sander . . . the new low cost Sterling Century! Uniformly sands wood, metal and composition—flat or curved surfaces. Only 4 inches high—pad speed 5000 r.p.m. Uses ⅓ standard abrasive sheet. Powerful, durable, built for long, continuous use! Send coupon for catalog.

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ATTENTION _____
STREET _____ CITY _____ STATE _____

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No. 600 — Clear Frame, Clear Lenses
No. 601 — Clear Frame, Green Lenses
No. 602 — Green Frame, Clear Lenses
No. 603 — Green Frame, Green Lenses

Workers have a "first row orchestra" view of the work with "Panoram" —
AO's Wide-Vision Safety Goggle!

Worn over prescription glasses or alone, its plastic frame, eyecups and replaceable lenses in either clear or green acetate provide snug, face-conforming protection. Eyecups vented at top and bottom assure ample ventilation, minimize clouding of lenses. Bridge is floating saddle type that fits comfortably. Elastic headband is extra wide, easily adjustable.

"Panoram" protects against foreign particles attacking from any direction. Recommended for chipping, grinding, babbitting, riveting, rail cutting, spike driving, spot welding, etc. Your nearest AO Safety Products Representative can supply you.

American Optical Company
Safety Products Division
SOUTHBRIDGE MASSACHUSETTS
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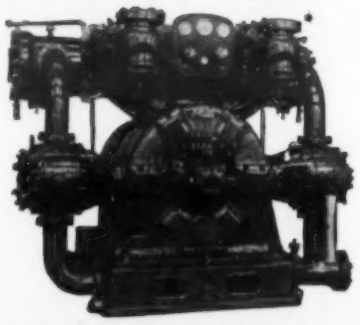
Unmatched In Low Air Cost



JOY WN-114 COMPRESSOR

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GALT, ONTARIO

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of Such Chemicals as:

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SLURRIES • CHLORINATED HYDROCARBONS
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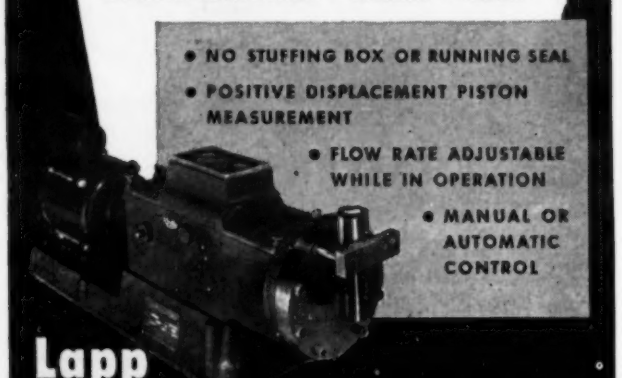

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PISTON-DIAPHRAGM CHEMICAL PROPORTIONING PUMP
WRITE for Bulletin 262 with complete description and specifications.
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Main Office
Cleveland 13, Ohio ..... Penton Building

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L. H. Weber & G. B. Guest — Penton Bldg., Cleveland 13
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New Equipment Digest is published monthly by Equipment Digest Publishing Co., Penton Building, Cleveland, Ohio; G. O. Hays, President; F. O. Rice, Vice President & Secretary; J. R. Dawley, J. H. Robison, Vice Presidents; E. L. Shaner, Treasurer

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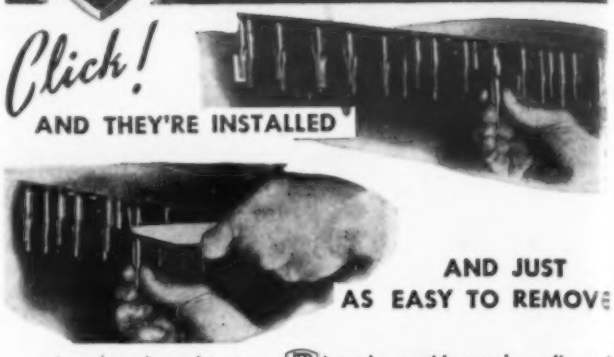
INTERCHANGEABLE
PUNCHES and DIES

Click!
AND THEY'RE INSTALLED



AND JUST AS EASY TO REMOVE

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standard punches and dies are stocked for immediate delivery. Punches and dies of special sizes, shapes and materials are made promptly to your specifications.

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Department 35 • 4610 Lawton Ave. • Detroit 8, Michigan

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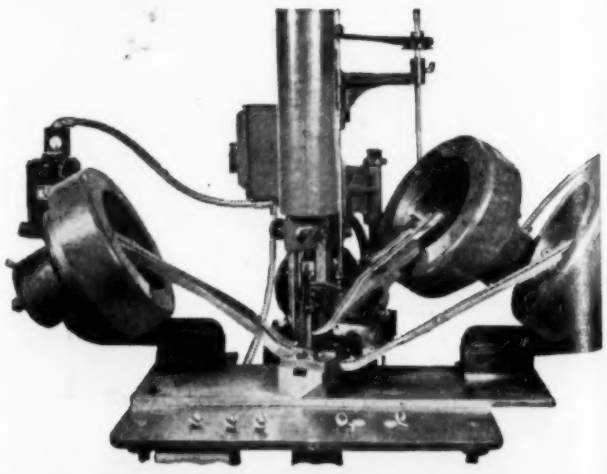
By using a DETROIT POWER SCREWDRIVER, the machine will AUTOMATICALLY assemble up to 30 units a minute, increasing over-all production 200% to 300%. By hand method, it would require 3 operators and 3 welders to match that record . . . All component parts are automatically fed from hoppers directly to positioning fixture . . . The machine automatically cycles and drives the screw by means of friction, as it is a slotless screw. Completed assembly is ejected beneath the table and carried to the welding operator.

WHAT IS YOUR PROBLEM? Send sample assembly for estimate and catalog.



DETROIT POWER SCREWDRIVER CO.
2819 WEST FORT ST. • DETROIT 16, MICHIGAN

Mention Item NED-6685 when writing

UNBRAKO

KNURLED
SOCKET HEAD
CAP SCREWS
... Slip-Proof Heads
... Extra Strong
... Made to Close Tolerances

There is an "UNBRAKO" Socket Head Screw of the correct diameter and length to meet every requirement—in toolrooms, in die shops, on assembly lines.

The *knurled head* of the "UNBRAKO" Socket Head Cap Screw does triple duty: (1) the *knurling* provides a sure, slip-proof grip; (2) the *knurling* permits positive locking; (3) the *knurling* speeds assembly, because it enables the "UNBRAKO" to be screwed in easier, faster, further with the fingers—handiest of all wrenches—before a "key" becomes necessary. Available in standard sizes from #4 to 1½" diameter in a full range of lengths. Write for free copy of "UNBRAKO" Catalog and name of nearest Distributor.

Knurling of Socket Screws originated with "Unbrako" in 1934.

Other "UNBRAKO" Products include: Socket Set Screws with Knurled Cup Points, Socket Set Screws with Knurled Threads, Square Head Set Screws with Knurled Cup Points—all patented, self-locking screws that won't shake loose. Socket Head Stripper Bolts. *Precision-Ground* Dowel Pins. *Fully Formed* Pressure Plugs.

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BOX 581, JENKINTOWN, PENNSYLVANIA
"Serving Industry continuously since 1903 through Industrial Distributors"

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¼ AND ½ TON MODELS

- 1 ton model has lifting speeds of 12 F.P.M. and 16 F.P.M.
- Push-button control leaves one hand free to guide the load.
- Wire rope has necessary flexibility for nominal side lifts.
- Grooved drum prevents wire rope from piling up.
- Lug type is standard. Top swivel hook or plain trolley easily attached.

Write for bulletin

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Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

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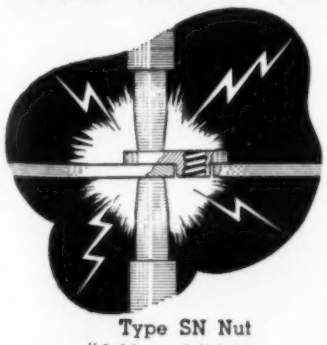
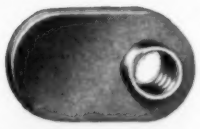
OHIO NUTS and SCREWS for SPOT WELDING





Type SN Nut
#8-32 to 5/16-24

SN Nuts are made of low carbon steel
Range of thread sizes shown for each part

Type SS Screw #8-32 to 3/8-24 SS Screws are made of low carbon steel, brass or stainless steel.

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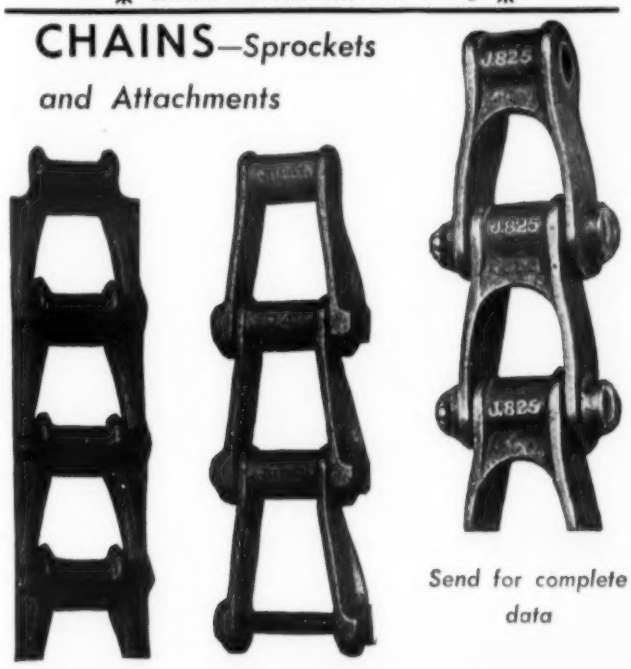

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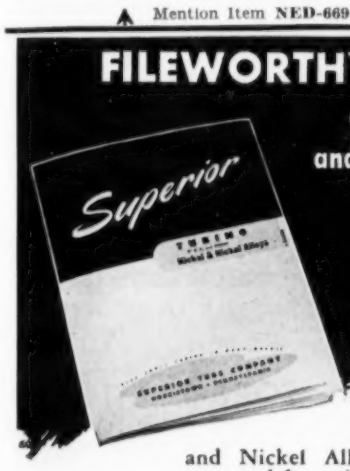

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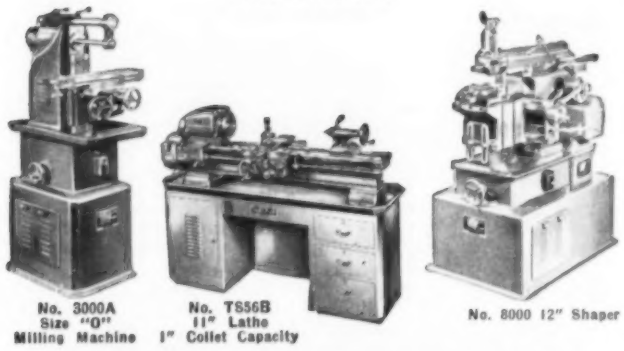

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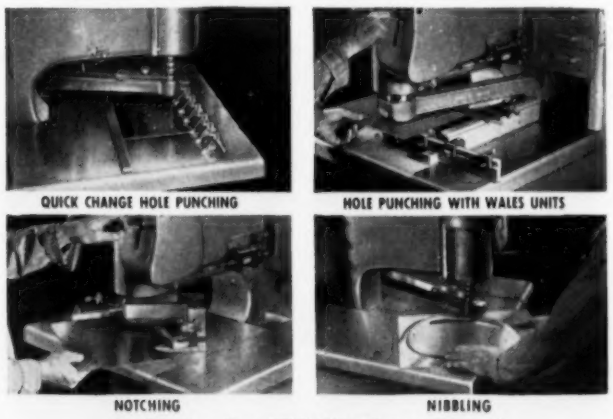

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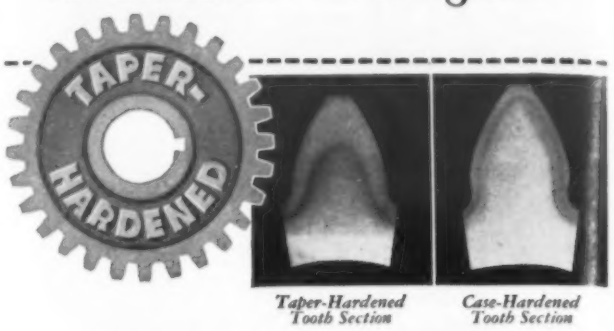

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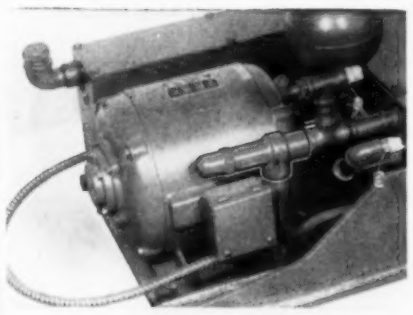

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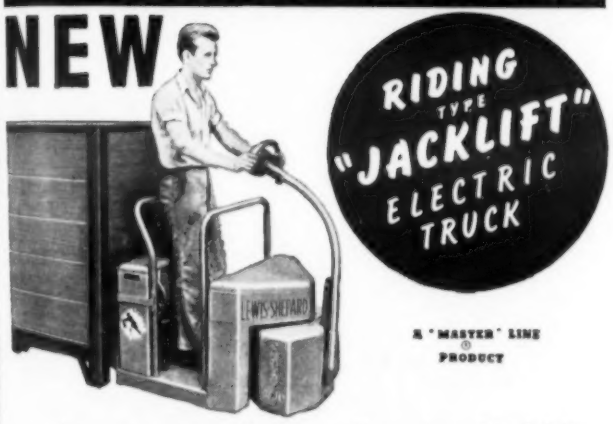

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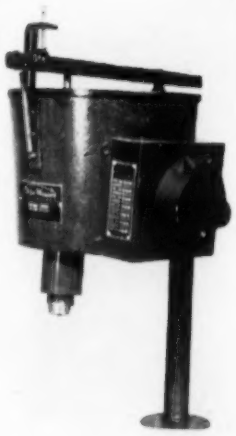

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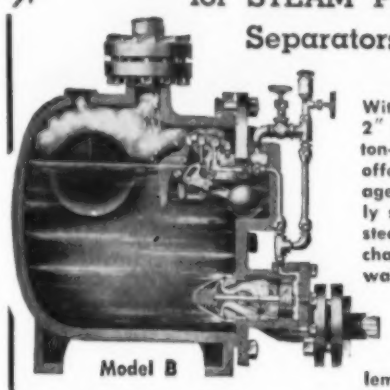
Nicholson Piston-Operated Traps Supply

ENORMOUS DRAINAGE

for STEAM PURIFIERS, Separators, Headers



With valve orifices up to 2" diam., Nicholson piston-operated steam traps offer unsurpassed drainage capacity. Universally specified for draining steam purifiers; discharge large volumes of water almost instantly. Increasingly installed wherever dirt and water in volume are a problem: superheated steam lines, headers, separators, heaters. Other features: won't leak even if cooked dry; rugged; working parts of stainless steel. Press., 2 to 650 lbs.

Also 3 models of weight-operated traps for steam, air, gasoline press. to 1500 lbs.

CATALOG 448 or see Sweet's.

W. H. NICHOLSON & CO. 162 OREGON STREET WILKES-BARRE, PA.

Valves ★ Traps ★ Steam Specialties

Mention Item NED-6702 when writing

The Acme Electric Control Transformers are compactly designed. The style illustrated, with end bells and conduit connection is made in ratings 25VA to 250 VA.

115 volt primary to 6 volt secondary
115 volt primary to 24 volt secondary
230 volt primary to 115 volt secondary
460 volt primary to 115 volt secondary
230/460 volt primary to 115 volt secondary
575 volt primary to 115 volt secondary

Other designs are illustrated in Control Catalog Bulletin C176.

ACME ELECTRIC CORPORATION
309 WATER STREET CUBA, N. Y.

Acme ACME Electric

Mention Item NED-6703 when writing

PATCH ANY FLOOR

. . . . . *ruined by*

WATER
GREASE
ACIDS
OIL
ABRASIVE WEAR

USED BY ALL INDUSTRIES, PUBLIC UTILITIES, & RAILROADS SINCE 1922

Send for free folder

with STONHARD STONPACH

SIMPLE . . any handy man can patch or resurface ruts and holes. FAST . . . STONHARD STONPACH can be applied immediately and traffic roll in a few hours. TOUGH . . . it makes a smooth, hard, nonskid, wear-resistant floor that can take terrific punishment. Send for complete facts about STONHARD STONPACH.

STONHARD COMPANY
101 Stonhard Building, 1306 Spring Garden Street
Philadelphia 23, Penna.

Clip and attach to letterhead 101-949
Please send me a FREE copy of "Stonpach Folder."
Firm .....
Mr. ..... Title .....
Address .....
City ..... Zone ..... State .....

Mention Item NED-6704 when writing

READY for Action!

Always ready for action, this Stearns Magnetic clutch has the vital job of transferring the power of the stand-by engine to the fan to insure uninterrupted ventilation at a large Southern coal mine. Picking up the load before the fan has stopped turning, the Stearns Magnetic clutch is the key to continuous ventilation.

Be sure to investigate Stearns Magnetic clutches before you buy. Write today for bulletin giving complete specifications and operating data.

Stearns MAGNETIC MANUFACTURING CO.
653 S. 28TH ST., MILWAUKEE 4, WIS.

▲ Mention Item NED-6705 when writing ▲

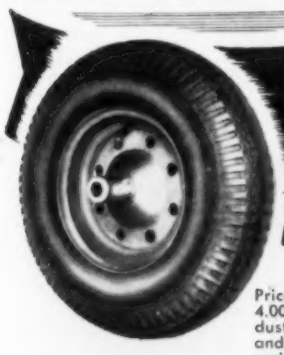
Save! MANPOWER · MONEY · ACCIDENTS

with a "CANTON" Portable Floor Crane

One man and a CANTON crane can lift and transport loads up to 3 tons. Safety mechanism holds the load at any point. Light weight tubular steel construction. Made in 8 sizes. Ask for bulletin N49.

The HILL ACME Company
"CANTON" DIVISION 6404 Breakwater Ave CLEVELAND 2, OHIO

▲ Mention Item NED-6706 when writing ▲



DICO* 400 x 8 WHEELS

DICO DC-303 Wheelbarrow and Industrial Wheel (Drop Center Rim)

There is a DICO Pneumatic-tired 4.00 x 8 wheel for practically every Industrial use—and in a varied Price Range. DICO DC-303 is a remarkable 4.00 x 8 wheel for Wheelbarrow and Industrial use. Stamped from 14 gauge steel and of accurate, sturdy design. Separate welded-in seamless drawn steel hub available in variable lengths 3" to 7½". Smooth running—"zerk" fitted with ⅝", ¾", 1" and 1¼" roller bearings. Designed for low speed applications.

DICO ZERO-PRESSURE
Model LB-75, 4.00 x 8 Wheel

PUNCTURE PROOF. Semi-pneumatic tires. This new DICO lug base wheel is designed for wheelbarrows, garden tractors, cement mixers, light agricultural equipment, platform dollies, and portable equipment where speeds do not exceed 8 to 10 M.P.H. Available with either Rib or Agricultural-Tractor Tread. Roller Bearings ⅝" and ¾". Hub lengths 6", 6½", 7" and 7½". Other bearing sizes available. Heavy duty 2-piece, 4 bolt design. 14 gauge steel. Conical center disc construction welded to separate heavy steel hub.

ALSO ASK FOR

DICO 4.00 x 8 Pneumatic Tired DEMOUNTABLE RIM High and Low Speed Wheels, or smaller wheels with 10", 12.6" and 14.3" outside rubber diameter.

"LET DICO SOLVE YOUR WHEEL PROBLEMS"

DICO MANUFACTURING CO.
406 S.W. 16TH ST. DES MOINES 5, IOWA

▲ Mention Item NED-6707 when writing ▲

CIRCULATOR PUMP
has 40-gpm capacity at 10-ft head

Although designed primarily for forced circulation and radiant heating systems, this Enpo circulator pump can be used also for recirculation and transfer applications in dairies, food processing and chemical plants. For operating totally submerged or in damp and wet locations, it can be furnished with submersible motor.

Pump can be obtained in all standard voltages and frequencies, and special conditions can be accommodated also. Made by **Piqua Machine & Mfg. Co.,** Young & College Sts., Piqua, O.

▲ Mention Item NED-6708 when writing ▲

PORTABLE VOLT-AMMETER
handles conductors up to 1⅛ in.

This pocket-sized Amprobe measures current and voltage without interrupting service. Plastic finger trigger opens transformer probes so that they can clamp around conductor to measure current in circuit. Voltage is measured by inserting test leads in front-mounted pin-jacks and connecting them to line. Instrument is available in two models, each with seven ranges: model A-5 is 6.5/13/26/65/130 amp and 130/260 v; and model A-6 is 10/25/50/198/250 amp and 150/600 v. Instrument is completely insulated and no metal parts come in contact with operator. Accuracy is plus or minus 3 per cent of full scale. Made by **Pyramid Instrument Co.,** Dept. NED, 49 Howard St., New York 13, N. Y.

▲ Mention Item NED-6709 when writing ▲

GAS-FIRED UNIT HEATER
utilizes infrared rays for quick heat

Recommended for heating warehouses, factories, and industrial buildings, Overhead Panelray heating unit warms occupants and solid objects regardless of air temperature. Infrared rays traveling in straight line are not diverted by drafts or air currents. Series of louvers direct rays downward on floors and working areas to eliminate cold spots and to maintain comfortable temperature. Unit is A.G.A. approved, completely vented and does not require any fans or blowers. All heating surfaces are porcelain enameled inside and out. Made by Day & Night Div., **Affiliated Gas Equipment, Inc.,** 702 Royal Oaks Dr., Monrovia, Calif.

▲ Mention Item NED-6710 when writing ▲

COVER PIPES TANKS, WALLS

INDUSTRIAL NoDrip

Anyone can brush, trowel or spray NoDrip on any clean, dry surface. Goes on like plaster, forms a seamless, protective coating, STOPS CONDENSATION DRIP.

NoDrip keeps equipment and floors safe and dry; prevents corrosion of metal and prolongs its life. Acid, alkali and brine resistant. Comes in 1, 5 and 55 gal. drums, ready for use.

TRY NoDRIP—Apply NoDrip to a small area, compare the results with uncovered portions

Send for NoDrip Handbook

J. W. MORTELL CO.
526 BURCH ST. KANKAKEE, ILL.

▲ Mention Item NED-6711 when writing ▲

NEW! VERSATILE

Van Dorn ⅜" Electric IMPACT WRENCH KIT . . . $126.50

1 **DRIVES and REMOVES** nuts, bolts, cap screws.

2 **DRILLS** holes up to ½" diam. in steel.

3 **TAPS** holes with threads sizes from No. 10-32 to ½"-13.

Here's the handy, versatile Kit you've been looking for to speed up maintenance and repair jobs! Convenient. Compact. Take it right to the work. Includes powerful Van Dorn ⅜" Electric Impact Wrench (½" square drive shank); Chuck for drilling and tapping, complete with open-end wrench and hex-key; 6 Hexagon sockets, 9/16" to ⅞" sizes; all-steel carrying kit. See your nearby Van Dorn Distributor. Write for detailed literature to: The Van Dorn Electric Tool Co., 762 Joppa Road, Towson 4, Md.

FOR POWER SPECIFY **"Van Dorn"** (Div. of Black & Decker Mfg. Co.) PORTABLE ELECTRIC TOOLS

▲ Mention Item NED-6712 when writing ▲

NEW FREE TO YOU HELPFUL

MERGA-FLOW FOLDER

This folder shows details of MergA-Flow operation and gives suggestions for application to your present conveyors.

See for yourself how the ingenious Alvey-Ferguson MergA-Flow Control merges two conveyor lines into one . . . prevents conveyor line jamming and costly conveyor line stoppages. You will get ideas how to keep main lines working at capacity—how to increase *your* plant's efficiency!

WRITE TODAY!

THE ALVEY-FERGUSON COMPANY
38 Disney Street *Established 1901* Cincinnati 9, Ohio
Offices or Representatives in Principal Cities—Coast to Coast

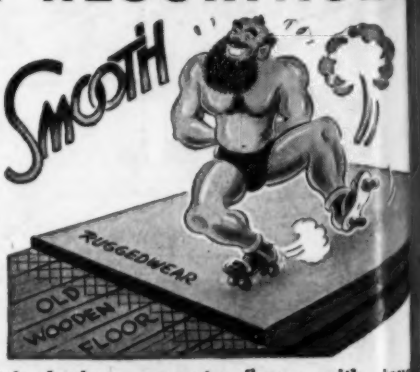
CONVEYING EQUIPMENT
Alvey-Ferguson
WASHING MACHINES FOR INDUSTRY

▲ Mention Item NED-6713 when writing ▲

TOUGH RESURFACER

FOR BROKEN Concrete or Wood Floors

Makes Durable Patch or Complete Overlay



Resurface or patch broken concrete floors with tough RUGGEDWEAR resurfacer. Here's a material which will stand up under the most punishing traffic conditions. Simple to install—no chopping or chipping required. Merely sweep out the spot to be repaired—mix the material—trowel it on. Holds solid and tight right up to irregular edge of old concrete. Provides a firm, tougher, smoother, more rugged wearing surface. Used indoors or out. Dries fast.

MAIL COUPON for FREE TRIAL OFFER

FLEXROCK COMPANY
3603 Filbert St., Philadelphia 4, Pa.
Offices in Principal Cities

Please send me complete RUGGEDWEAR information and details of TRIAL ORDER PLAN—no obligation.

Name .....
Company .....
Address .....

▲ Mention Item NED-6714 when writing ▲